INTERNATIONAL COLLEGE OF APPLIED KINESIOLOGY U.S.A.

Experimental Observations of Members of the ICAK

Volume 1, 2012-2013

Fifty-Fourth Collection of the Proceedings of the Annual Meeting

International College of Applied Kinesiology® – U.S.A.

Experimental Observations of the Members of the ICAK

Volume I, 2012-2013

Proceedings of the Annual Meeting

Professional Applied Kinesiology™

International College of Applied Kinesiology® – U.S.A.

Experimental Observations of the Members of the ICAK

Volume I, 2012-2013

Proceedings of the Annual Meeting

Presented:

May 31 – June 3, 2012
Dallas, TX

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Jennifer Palmer, Executive Director
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Message from the Chairman

David Leaf, D.C., DIBAK

For 36 years, the members of the International College of Applied Kinesiology®-U.S.A. have shared their insights, outcomes, case histories and research through the papers presented in the *Proceedings.* The ICAK-U.S.A. continues to thrive as an "Arena of Ideas" through which members have the opportunity to present their observations and research results. These published works document the first steps toward the furtherance and development of the authors' hypotheses, concepts and procedural techniques which can culminate in their material becoming part of the accepted body of knowledge we know as applied kinesiology. We invite all members to participate in this endeavor in the future.

Past history shows that the observations of one doctor stimulate the minds of others and the end result can be, as Dr. Goodheart credits Dr. Deal as saying, "and now we have another piece of the puzzle."

I am pleased to again have the opportunity to read and share with the members the advances and successes of this year.

Thank you and congratulations to all of our contributors. I would like to offer a special thanks to Drs. Allan Zatkin, Barton Stark, David Engel, Janet Calhoon, JJ Gregor, Matthew Keschner and Scott Cuthbert for all their help during the review process. We look forward to seeing you at the Annual Meeting, May 31–June 3, 2012 in Dallas, TX.

Introduction

This fifty fourth collection of papers from members of the International College of Applied Kinesiology®-U.S.A. contains 37 papers written by 23 authors. The authors welcome comments and further ideas on their findings. You may talk with them at the meeting or write them directly; addresses are given in the Table of Contents.

The manuscripts are published by ICAK-U.S.A. as presented by the authors. There has been no effort to edit them in any way; however, they have been reviewed by the *Proceedings* Review Team for originality and to determine that they follow the "Instructions to Authors" published by the ICAK-U.S.A. The primary purpose of the ICAK-U.S.A. in publishing the *Proceedings* is to provide an interchange of ideas to stimulate improved examination and therapeutic methods in applied kinesiology.

It should be understood that the procedures presented in these papers are not to be construed as a single method of diagnosis or treatment. The ICAK-U.S.A. expects applied kinesiology to be used by physicians licensed to be primary health care providers as an adjunct to their standard methods of diagnosis and treatment.

There are three divisions of the *Proceedings* of the Annual Meeting of the International College of Applied Kinesiology®-U.S.A. Division I consists of papers for members' information. Division II contains papers inviting constructive comments to be published in future editions of the *Proceedings*. Division III is for constructive comments on papers published in Division II and for subjects that might be included in "Letters to the Editor" of a refereed journal. Papers will be put in Division I or II at the author's request. It is expected that authors will choose Division I for papers such as anecdotal case studies, thought-provoking new ideas that have not been researched, and other types of papers that are for the membership's general information. It is expected that Division II will include papers that have a research design, or those the author has thoroughly studied and worked with and believes to be a viable approach of examination and/or treatment. Studies to test methods developed by others, often called validation studies, fit well here. This area also lends itself to editorial-type comments about the practice of applied kinesiology and its procedures. Division III is somewhat similar to the "Letters to the Editor" section of refereed journals. It provides a forum for members to comment on research design or other factors in papers previously presented. Its purpose is for us to improve the quality of our presentations and, in some cases, to provide rebuttal to presented material. Comments on papers will only be published in this area if the paper was presented in Division II inviting constructive criticism.

Neither the International College of Applied Kinesiology®-U.S.A., its Executive Board, nor the membership, nor the International Board of Examiners, International College of Applied Kinesiology, necessarily endorses, approves of, or vouches for the originality or authenticity of any statements of fact or opinion in these papers. The opinions and positions stated are those of the authors and not by act of publication necessarily those of the International College of Applied Kinesiology®-U.S.A., the Executive Board or membership of the International College of Applied Kinesiology®-

U.S.A., or the International Board of Examiners, International College of Applied Kinesiology.

Instructions to Authors

Proceedings of the ICAK-U.S.A.

Manuscripts are reviewed for format, technical content, originality, and quality for reproduction. There is no review for authenticity of material.

The ICAK-U.S.A. recognizes that the usual procedure for selection of papers in the scientific community is a blind review. However, the purpose of *The Proceedings of the ICAK-U.S.A.* is to stimulate dialogue, creative thinking and critical review among its members; thus, review in this instance is not blinded. These papers are distributed only to the members of the ICAK-U.S.A. for general comment and evaluation, and for the members to put into perspective the validity of the described approaches. The purpose is to put before the membership primary observations that may lead to more in-depth study and scientific investigations, as well as spawn new areas of research. Such is to inspire progress in the field of applied kinesiology.

Statements and opinions expressed in the articles and communications in *The Proceedings of the ICAK-U.S.A.* are those of the author(s) and the editor(s). The ICAK-U.S.A. disclaims any responsibility or liability for such material.

The current ICAK-U.S.A. Status Statement appears in *The Proceedings of the ICAK-U.S.A.* It is recommended that procedures presented in papers conform to the Status Statement; papers that do not will be published and identified in the table of contents as failing to conform. Whenever possible, all papers should be supported by statistical analyses, literary references, and/or any other data supporting the procedure.

The ***Proceedings of the ICAK-U.S.A***. is published in **three divisions**:

I) Papers intended by the author as informative to the membership and not inviting critical review.

II) Papers inviting critical and constructive comments from the membership in order to improve the total value of the paper. Comments may be made on such items as research design, methods presented, clarity of presentation, and practical use in a clinical setting. The author must include with his/her paper written indication of desire for the paper to be included in the section inviting critical review or for informative purposes.

III) Review comments on papers published in Division II. These particular submissions are intended for constructive review. Opinions or editorials with negative connotations only may be rejected.

Manuscripts are accepted by the ICAK-U.S.A. for publication with the understanding that they represent original unpublished work. Delivery of a manuscript to the ICAK-U.S.A. Central Office does not imply it will be published in the Proceedings. Manuscripts are reviewed by the Proceedings Review Committee and authors will be notified in a timely manner of their manuscripts acceptance or rejection. The author may appeal any paper rejected to a separate committee composed of members of the Publications and Research

Advisory Committees. The decision of this committee on publishing the paper will be final.

The paper must be an original work and deal specifically with applied kinesiology examination and/or treatment techniques. Various techniques may be discussed if they are correlated with applied kinesiology manual muscle testing examination.

All manuscripts (meaning any material submitted for consideration to publish) must be accompanied by a properly completed *RELEASE FORM*, signed by all authors and by any employer if the submission represents a "work for hire." Upon such submission, it is to be understood by all authors that no further dissemination of any part of the material contained in the manuscript is permitted, in any manner, without prior approval from the editor; nonobservance of this copyright agreement may result in the cancellation of the ICAK-U.S.A.'s consideration to publish.

Continuing call for papers includes:

Research studies (Investigations)—reports of new research findings pertaining to the enhancement of factors of health, causal aspects of disease, and the establishment of clinical efficacies of related diagnostic and therapeutic procedures.

Hypotheses—projections from previous observations that may establish a solid basis for further in-depth investigations.

Literature reviews—critical assessments of current knowledge of a particular subject of interest, with emphasis on better correlation, the identification of ambiguities, and the delineation of areas that may constitute hypotheses for further study. Meta-analyses are included here.

Clinical procedures—succinct, informative, didactic papers on diagnostic and therapeutic procedures, based heavily on authoritative current knowledge.

Case reports—accounts of the diagnosis and treatment of unusual, difficult, or otherwise interesting cases that may have independent educational value or may contribute to better standardization of care for a particular health problem when correlated with similar reports of others.

Case reviews—a retrospective comparative assessment of the diagnosis and treatment of several cases of a similar condition i.e., the comparative evaluation of two or more case reports.

Technical reports—the reporting and evaluation of new or improved equipment or procedures, or the critical evaluation of old equipment or procedures that have not previously been critically evaluated.

Commentary—editorial-like, more in-depth essays on matters relating to the clinical, professional, educational, and/or politicolegal aspects of health care principles and practice.

Critical review (Letters to the editor)—communications that are directed specifically to the editor that critically assess some aspect of the ICAK, particularly as such assessment may add to, clarify, or point up a deficiency in a recently published paper; authors are afforded the privilege of a counter-response.

The following editorial policies will apply:

Informed consent—Manuscripts that report the results of experimental investigations with human subjects must include a statement that informed consent was obtained, in writing, from the subject or legal guardian, after the procedure(s) had been fully explained with documentation that such procedures have been fully understood. Photographs or artistic likenesses of subjects are publishable only with their written consent or the consent of a legal guardian; the signed consent form, specifying any special conditions (e.g. eyes blocked off), must accompany manuscript.

Patient anonymity—Ethical and legal considerations require careful attention to the protection of the patient's anonymity in case reports and elsewhere. Identifying information such as names, initials, actual case numbers, and specific dates must be avoided; other identifying information about a patient's personal history and characteristics should be disguised.

Authorship—all authors of papers submitted to ICAK-U.S.A. must have an intellectual stake in the material presented for publication. All must be willing to answer for the content of the work. Authors should be willing to certify participation in the work, vouch for its validity, acknowledge reviewing and approving the final version of the paper, acknowledge that the work has not been previously published elsewhere, and be able to produce raw data if requested.

Conflict of interest—in recognition that it may at times be difficult to judge material from authors where proprietary interests are concerned, authors should be prepared to answer requests from the editor regarding potential conflicts of interest. The editor makes the final determination concerning the extent of information released to the public.

Acknowledgments—Illustrations from other publications must be submitted with written approval from the publisher (and author if required) and must be appropriately acknowledged in the manuscript.

Author responsibility—Manuscripts accepted for publication are subject to such editorial modification and revision as may be necessary to ensure clarity, conciseness, correct usage, and conformance to approved style. However, insofar as authors are responsible for all information contained in their published work, they will be consulted if substantive changes are required and will have further opportunity to make any necessary corrections on the proofs.

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Manuscript Preparation

Authors are requested to submit final manuscripts via email to icak@dci-kansascity.com or on computer disc (CD) to 6405 Metcalf Ave., Suite 503 Shawnee Mission, KS 66202. Each manuscript file should be titled with the author's last name and the manuscript tile. All manuscripts must be submitted in Microsoft Word.

The ICAK-U.S.A. does not assume responsibility for errors in conversion of customized software, newly released software and special characters. Mathematics and tabular material will be processed in the traditional manner.

Approved Manuscript Style

Manuscripts submitted for consideration to publish in *The Proceedings of the ICAK-U.S.A.* must be compiled in accordance with the following instructions, and manuscripts not so compiled are subject to return to the author for revision.

Summary of Requirements

Type the manuscript double-spaced, including title page, abstract and key words, text, acknowledgments, references, tables, and figure legends. (Note: footnotes should be avoided by including any necessary explanatory information within the text in parentheses). Do not break any words (hyphenate) at the end of any line; move to the next line if entire word does not fit.

Each manuscript component should begin on a new page, in the following sequence:

- Title page (page 1)
- Abstract and key word page (page 2)
- Text pages (starting on page 3)
- Acknowledgment page
- Reference page(s)
- Table page(s)
- Legends for illustrations pages(s).

Detailed Preparation Procedure

Begin each of the following sections on separate pages: title (including author name[s], address and phone number of principal author, etc), abstract and key words, text, acknowledgments, references, individual tables, and figure legends.

Units of measurement—In most countries the International System of Units (SI) is standard, or is becoming so, and bioscientific journals in general are in the process of requiring the reporting of data in these metric units. However, insofar as this practice is not yet universal, particularly in the United States, it is permissible for the time being to report data in the units in which calculations were originally made, followed by the opposite unit equivalents in parentheses; ie, English units (SI units) or SI units (English units). Nevertheless, researchers and authors considering submission of manuscripts to the ICAK-U.S.A. should begin to adopt SI as their primary system of measurement as quickly as it is feasible.

Abbreviations and symbols—Use only standard abbreviations for units of measurement, statistical terms, biological references, journal names, etc. Avoid abbreviations in titles and abstracts. The full term for which an abbreviation stands should precede its first use in the manuscript unless it is a standard unit of measurement.

Title Page

The title page should carry (1) the title of the article, which should be concise but informative; (2) a short footline of no more than 40 characters (count letters and spaces) placed at the foot of the title page and identified; (3) first name, middle initial, and last name of each author, with highest academic degree(s); (4) names of department(s) and institution(s) to which work should be attributed; (5) disclaimers, if any; (6) name, address, phone, and fax number of author responsible for correspondence, proofreading of galleys, and reprint requests (usually principal author); (7) the source(s) of support in the form of grants, equipment, drugs, or all of these.

Abstract and Key Word Page

The second page should carry an abstract of no more than 150 words, 250 if using a structured abstract. The structured abstract is now required for all original data reports, reviews of the literature and case reports; prose abstracts will be accepted for use in only certain original papers not reporting data (i.e., position papers, historical treatises).

Please visit the following link online for helpful information on structured abstracts: www.soto-usa.org/Newsletter/DCInternetEdition/dc_internet_ed_vol_3_no3Abstrak/StructuredAbstracts.htm.

Below the abstract, provide, and identify as such, 3 to 10 key indexing terms or short phrases that will assist indexers in cross-indexing your article and that may be published with the abstract. Use terms from the Index Medicus Medical Subject Headings (MeSH) as much as possible.

Text Pages

The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings Introduction, Materials and Methods, Results, Discussion, and Conclusions. Long articles may need subheadings within some sections to clarify or break up content. Other types of articles such as case reports, reviews, editorials, and commentaries may need other formats.

Please visit the following link online for helpful information on writing patient case reports:
www.soto-usa.org/Newsletter/DCInternetEdition/dc_internet_ed_vol_3_no3Abstrak/Green%20Johnson%20Case%20Reports.pdf

> Reference: Green BN, Johnson CD, Writing Patient Case Reports for Peer-Reviewed Journals: Secrets of the Trade Journal of Sports Chiropractic & Rehabilitation. 2000 Sep; 14(3): 51-9.

Introduction

Clearly state the purpose of the article. Summarize the rationale for the study or observation. Give only strictly pertinent references and do not review the subject extensively; the introduction should serve only to introduce what was done, why it was done and what could be done to address shortcomings or gaps in what we have learned from what was done.

Materials and Methods

Describe your selection of the observational or experimental subjects (patients or experimental animals, including controls) clearly. Identify the methods, apparatus (manufacturer's name and address in parentheses) and procedures in sufficient detail to allow others to reproduce the work for comparison of results. Give references to establish methods, provide references and brief descriptions for methods that have been published but may not be well known, describe new or substantially modified methods, give reasons for using them and evaluate their limitations.

When reporting experiments on or with human subjects, indicate whether the procedures used were in accordance with the ethical standards of the Committee on Human Experimentation of the institution in which the research was conducted and/or were done in accordance with the Helsinki Declaration of 1975. When reporting experiments on animals, indicate whether the institution's or the National Research Council's guide for the care and use of laboratory animals was followed. Identify precisely all drugs and chemicals used, including generic name(s), dosage(s), and route(s) of administration. Do not use patient names, initials, or hospital numbers or in any manner give information by which the individuals could be identified.

Include numbers of observations and the statistical significance of the findings when appropriate. Detailed statistical analyses, mathematical derivations, and the like may sometimes be suitably presented in the form of one or more appendices.

Results

Present your results in logical sequence in the text, tables, and illustrations. Do not repeat in the text all the data in the tables, illustrations, or both; emphasize or summarize only important observations.

Discussion

Emphasize the new and important aspects of the study and conclusions that follow from them. Do not repeat in detail the data given in the Results section. Include in the Discussion the implications of the findings and their limitations and relate the observations to other relevant studies. Conclusions that may be drawn from the study may be alluded in this section; however, they are more formally presented in the section to follow.

Conclusions

The principal conclusions should be directly linked to the goals of the study. Unqualified statements and conclusions not completely supported by your data should be avoided. Avoid claiming priority and alluding to work that has not been completed. State new hypotheses when warranted but clearly label them as such. Recommendations (for further study, etc), when appropriate, may be included.

Acknowledgments

Acknowledge only persons who have made substantive contributions to the study itself; this would ordinarily include support personnel such as statistical or manuscript review consultants, but not subjects used in the study or clerical staff. Authors are responsible for obtaining written permission from persons being acknowledged by name, as readers will infer their endorsement of the data and conclusions.

Reference Pages

References are to be numbered consecutively as they are first used in the text (placed in line in parentheses) and listed in that order (not alphabetically) beginning on a separate sheet following the text pages. The style (including abbreviation of journal names) must be in accordance with that specified by the US National Library of Medicine: see recent January issue of *Index Medicus* for a complete listing of indexed journals.

Only those references that actually provide support for a particular statement in the text, tables, and/or figures should be used. Excessive use of references should be avoided; normally, 1 or 2 authoritative references to support a particular point are sufficient. A short article of up to 5 or 6 manuscript pages may be adequately supported by 5 to 10 references; longer articles of up to 20 pages by 15 to 25.

References must be verified by the author(s) against the original document. Abstracts, "unpublished observations" and "personal communications" may not be used as references, although reference to written (not verbal) communications may be inserted in parentheses in the text. Information from manuscripts submitted but not yet accepted may be referred to in parentheses in the text. Manuscripts accepted but not yet published may be included in the references with the designation "In press." When a previously cited reference is used again, it is designated in the text in parentheses by the number originally assigned to it by its first use: do not assign it another number or use the notation "op cit."

For the most part, sources of information and reference support for a bioscientific paper should be limited to journals (rather than books) because that knowledge is generally considered more recent and more accurate since it is customarily peer-reviewed. Consequently, the basic form for approved reference style is established by journal listings; others (books, etc) are modified from journal listings as may be required. A summary of journal reference style is as follows:

Last name of author(s) and their initials in capitals separated by a space with a comma separating each author. (List all authors when 6 or fewer; when 7 or more, list only the first 6 and add et al.)

Title of article with first word capitalized and all other words in lower case, except names of persons, places, etc.

Name of journal, abbreviated according to *Index Medicus*; year of publication (followed by a semicolon); volume number (followed by a colon); and inclusive pages of article (with redundant number omitted: e.g., 105-10).

Specific examples of correct reference form for journals and their modifications to other publications are as follows:

Journals

1. Standard article You CH, Lee KY, Chey RY, Menguy R. Electrogastrographic study of patients with unexplained nausea, bloating and vomiting. Gastroenterology 1980; 79:311-4.

2. Corporate author The Royal Marsden Hospital Bone-Marrow Transplantation Team. Failure of synergeneic bone-marrow graft without preconditioning in post-hepatitis marrow aplasia. Lancet 1977;2:242-4.
3. No author given Coffee drinking and cancer of the pancreas [editorial]. Br Med J 1981;283:628.

4. Journal supplement Magni F. Rossoni G, Berti F. BN-52021 protects guinea-pig from heart anaphylaxis. Pharmacol Res Commun 1988;20 Suppl 5:75-8.

5. Journal paginated by issue rather than volume Seaman WB. The case of pancreatic pseudocyst. Hosp Pract 1981;16:24-5.

Books and other monographs

6. Personal author(s) Eisen HN. Immunology: an introduction to molecular and cellular principles of the immune response. 5th ed. New York: Harper and Row; 1974. p. 406.

7. Editor, compiler, chairman as author Dausset J, Colombani J, editors. Histocompatibility testing 1972. Copenhagen: Munksgaard; 1973. p. 12-8.

8. Chapter in a book Weinstein L, Swartz MN. Pathogenic properties of invading microorganisms. In: Sodeman WA Jr, Sodeman WA, editors. Pathologic physiology: mechanisms of disease. Philadelphia: WB Saunders; 1974. p. 457-72.

9. Published proceedings paper DuPont B. Bone marrow transplantation in severe combined immunodeficiency with unrelated MLC compatible donor. In: White HJ, Smith R, editors. Proceedings of the 3rd Annual Meeting of the International Society for Experimental Hematology. Houston: International Society for Experimental Hematology; 1974. p. 44-6.

10. Agency publication Ranofsky AL. Surgical operations in short-stay hospitals: United States—1975. Hyattsville (MD): National Center for Health Statistics; 1978. DHEW publication no (PHS) 78-1785. (Vital and health statistics; series 13; no 34).

11. Dissertation or thesis Cairns RB. Infrared spectroscopic studies of solid oxygen [dissertation]. Berkeley (CA): University of California; 1965.

Other articles

12. Newspaper article Lee G. Hospitalizations tied to ozone pollution: study estimates 50,000 admissions annually. The Washington Post 1996 Jun 21; Sect. A:3 (col. 5).

13. Magazine article Roueche B. Annals of medicine: the Santa Claus culture. The New Yorker 1971 Sep 4:66-81.

Table Pages

Type each table on a separate sheet; remember to double-space all data. If applicable, identify statistical measures of variation, such as standard deviation and standard error of mean. If data are used from another published or unpublished source, obtain permission and acknowledge fully.

Using Arabic numerals, number each table consecutively (in the order in which they were listed in the text in parentheses) and supply a brief title to appear at the top of the table above a horizontal line; place any necessary explanatory matter in footnotes at the bottom of the table below a horizontal line and identify with footnote symbols *, †, ‡, §, , ¶, **, ††, ‡‡, etc.

Illustration Legend Pages

Type legends for illustrations double-spaced, starting on a separate page, following the table pages. Identify each legend with Arabic numerals in the same manner and sequence as they were indicated in the text in parentheses (e.g., Figure 1). Do not type legends on artwork copy or on pages to which illustrations may have been mounted; they must be typed on separate pages from the illustrations themselves.

When symbols, arrows, numbers or letters are used to identify parts of the illustrations, identify and explain each one clearly (if necessary) in the legend. Explain internal scale and method of staining in photomicrographs, if applicable.

Illustration Preparation

Illustrations (including lettering, numbering and/or symbols) must be of professional quality and of sufficient size so that when they are reproduced for publication all details will be clearly discernible; rough sketches with freehand or typed lettering are not encouraged. All illustrations should be submitted embedded in the manuscript document in the appropriate place.

If photographs of persons are used, either the subjects must not be identifiable or their pictures must be accompanied by written permission to publish the photographs.

Cite each figure in the text (generally in parentheses) in consecutive order. If a figure has been published, acknowledge the original source and submit a written permission letter from the copyright holder to reproduce the material. Permission is required, regardless of authorship or publisher, except for documents in the public domain*.

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Manuscript Submission Summary

Manuscript components

In terms of completeness of submission, the "manuscript" includes the following components:

- Manuscript electronically via email of CD (The author should be sure to retain the original file in case of loss of the submission copies in transit.)
- Release form (signed by all authors, and by employer if study was a work for hire).
- Permission letter(s) of permission to use previously published material in all forms and media (if applicable).
- Consent form(s) to publish photographs in which subjects may be identifiable (if applicable).

- Cover letter from principal author (or author specified as correspondent) providing any special information regarding the submission which may be helpful in its consideration for publication.

Submission Instructions

The manuscript should be emailed to the Central Office at icak@dci-kansascity.com. The Release Form should be completed and signed then fax to 913-384-5112 or mailed to:

The ICAK-U.S.A. Central Office
6405 Metcalf Ave, Suite 503
Shawnee Mission, KS 66202

Applied Kinesiology
Status Statement

International College of Applied Kinesiology-U.S.A.

The International College of Applied Kinesiology–U.S.A. provides a clinical and academic arena for investigating, substantiating, and propagating A.K. findings and concepts pertinent to the relationships between structural, chemical, and mental factors in health and disease and the relationship between structural faults and the disruption of homeostasis exhibited in functional illness.

A.K. is an interdisciplinary approach to health care which draws together the core elements of the complementary therapies, creating a more unified approach to the diagnosis and treatment of functional illness. A.K. uses functional assessment measures such as posture and gait analysis, manual muscle testing as functional neurologic evaluation, range of motion, static palpation, and motion analysis. These assessments are used in conjunction with standard methods of diagnosis, such as clinical history, physical examination findings, laboratory tests, and instrumentation to develop a clinical impression of the unique physiologic condition of each patient, including an impression of the patient's functional physiologic status. When appropriate, this clinical impression is used as a guide to the application of conservative physiologic therapeutics.

The practice of applied kinesiology requires that it be used in conjunction with other standard diagnostic methods by professionals trained in clinical diagnosis. As such, the use of applied kinesiology or its component assessment procedures is appropriate only to individuals licensed to perform those procedures.

The origin of contemporary applied kinesiology is traced to 1964 when George J. Goodheart, Jr., D.C., first observed that in the absence of congenital or pathologic anomaly, postural distortion is often associated with muscles that fail to meet the demands of muscle tests designed to maximally isolate specific muscles. He observed that tender nodules were frequently palpable within the origin and/or insertion of the tested muscle. Digital manipulation of these areas of apparent muscle dysfunction improved both postural balance and the outcome of manual muscle tests. Goodheart and others have since observed that many conservative treatment methods improve neuromuscular function as perceived by manual muscle testing. These treatment methods have become the fundamental applied kinesiology approach to therapy. Included in the AK approach are specific joint manipulation or mobilization, various myofascial therapies, cranial techniques, meridian therapy, clinical nutrition, dietary management, and various reflex procedures. With expanding investigation there has been continued amplification and modification of the treatment procedures. Although many treatment techniques incorporated into applied kinesiology were pre-existing, many new methods have been developed within the discipline itself.

Often the indication of dysfunction is the failure of a muscle to perform properly during the manual muscle test. This may be due to improper facilitation or neuromuscular inhibition. In theory some of the proposed etiologies for the muscle dysfunction are as follows:

- Myofascial dysfunction (microavulsion and proprioceptive dysfunction)
- Peripheral nerve entrapment
- Spinal segmental facilitation and deafferentation
- Neurologic disorganization
- Viscerosomatic relationships (aberrant autonomic reflexes)
- Nutritional inadequacy
- Toxic chemical influences
- Dysfunction in the production and circulation of cerebrospinal fluid
- Adverse mechanical tension in the meningeal membranes
- Meridian system imbalance
- Lymphatic and vascular impairment

On the basis of response to therapy, it appears that in some of these conditions the primary neuromuscular dysfunction is due to deafferentation, the loss of normal sensory stimulation of neurons due to functional interruption of afferent receptors. It may occur under many circumstances, but is best understood by the concept that with abnormal joint function (subluxation or fixation) the aberrant movement causes improper stimulation of the local joint and muscle receptors. This changes the transmission from these receptors through the peripheral nerves to the spinal cord, brainstem, cerebellum, cortex, and then to the effectors from their normally-expected stimulation. Symptoms of deafferentation arise from numerous levels such as motor, sensory, autonomic, and consciousness, or from anywhere throughout the neuraxis.

Applied kinesiology interactive assessment procedures represent a form of functional biomechanical and functional neurologic evaluation. The term "functional biomechanics" refers to the clinical assessment of posture, organized motion such as in gait, and ranges of motion. Muscle testing readily enters into the assessment of postural distortion, gait impairment, and altered range of motion. During a functional neurologic evaluation, muscle tests are used to monitor the physiologic response to a physical, chemical, or mental stimulus. The observed response is correlated with clinical history and physical exam findings and, as indicated, with laboratory tests and any other appropriate standard diagnostic methods. Applied kinesiology procedures are not intended to be used as a single method of diagnosis. Applied kinesiology examination should enhance standard diagnosis, not replace it.

In clinical practice the following stimuli are among those which have been observed to alter the outcome of a manual muscle test:

- Transient directional force applied to the spine, pelvis, cranium, and extremities.
- Stretching muscle, joint, ligament, and tendon
- The patient's digital contact over the skin of a suspect area of dysfunction termed therapy localization

- Repetitive contraction of muscle or motion of a joint
- Stimulation of the olfactory receptors by fumes of a chemical substance
- Gustatory stimulation, usually by nutritional material
- A phase of diaphragmatic respiration
- The patient's mental visualization of an emotional, motor, or sensory stressor activity
- Response to other sensory stimuli such as touch, nociceptor, hot, cold, visual, auditory, and vestibular afferentation

Manual muscle tests evaluate the ability of the nervous system to adapt the muscle to meet the changing pressure of the examiner's test. This requires that the examiner be trained in the anatomy, physiology, and neurology of muscle function. The action of the muscle being tested, as well as the role of synergistic muscles, must be understood. Manual muscle testing is both a science and an art. To achieve accurate results, muscle tests must be performed according to a precise testing protocol. The following factors must be carefully considered when testing muscles in clinical and research settings

- Proper positioning so the test muscle is the prime mover
- Adequate stabilization of regional anatomy
- Observation of the manner in which the patient or subject assumes and maintains the test position
- Observation of the manner in which the patient or subject performs the test
- Consistent timing, pressure, and position
- Avoidance of pre-conceived impressions regarding the test outcome
- Non-painful contacts -- non-painful execution of the test
- Contraindications due to age, debilitative disease, acute pain, and local pathology or inflammation

In applied kinesiology a close clinical association has been observed between specific muscle dysfunction and related organ or gland dysfunction. This viscerosomatic relationship is but one of the many sources of muscle weakness. Placed into perspective and properly correlated with other diagnostic input, it gives the physician an indication of the organs or glands to consider as possible sources of health problems. In standard diagnosis, body language such as paleness, fatigue, and lack of color in the capillaries and arterioles of the internal surface of the lower eyelid gives the physician an indication that anemia can be present. A diagnosis of anemia is only justified by laboratory analysis of the patient's blood. In a similar manner, the muscle-organ/gland association and other considerations in applied kinesiology give indication for further examination to confirm or rule out an association in the particular case being studied. It is the physician's total diagnostic work-up that determines the final diagnosis.

An applied kinesiology-based examination and therapy are of great value in the management of common functional health problems when used in conjunction with information obtained from a functional interpretation of the clinical history, physical and laboratory examinations, and from instrumentation. Applied kinesiology helps the physician understand functional symptomatic complexes. In assessing a patient's status, it

is important to understand any pathologic states or processes that may be present prior to instituting a form of therapy for what appears to be a functional health problem.

Applied kinesiology-based procedures are administered to achieve the following examination and therapeutic goals:

- Provide an interactive assessment of the functional health status of an individual which is not equipment intensive but does emphasize the importance of correlating findings with standard diagnostic procedures
- Restore postural balance, correct gait impairment, improve range of motion
- Restore normal afferentation to achieve proper neurologic control and/or organization of body function
- Achieve homeostasis of endocrine, immune, digestive, and other visceral function
- Intervene earlier in degenerative processes to prevent or delay the onset of frank pathologic processes

When properly performed, applied kinesiology can provide valuable insights into physiologic dysfunctions; however, many individuals have developed methods that use muscle testing (and related procedures) in a manner inconsistent with the approach advocated by the International College of Applied Kinesiology–U.S.A. Clearly the utilization of muscle testing and other AK procedures does not necessarily equate with the practice of applied kinesiology as defined by the ICAK–U.S.A.

There are both lay persons and professionals who use a form of manual muscle testing without the necessary expertise to perform specific and accurate tests. Some fail to coordinate the muscle testing findings with other standard diagnostic procedures. These may be sources of error that could lead to misinterpretation of the condition present, and thus to improper treatment or failure to treat the appropriate condition. For these reasons the International College of Applied Kinesiology–U.S.A defines the practice of applied kinesiology as limited to health care professionals licensed to diagnose.

Approved by the Executive Board of the International College of Applied Kinesiology–U.S.A., June 16, 1992. Updated May, 2001.

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Division I

Informative Papers

Evaluation and Treatment of Dysfunctional Vestibulo-ocular Reflexes, Vestibulospinal Reflexes, and Vestibulocerebellar Loops with Manual Muscle Testing and Manipulative Therapies

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ABSTRACT:
Vestibulo-ocular Reflexes (VOR), Vestibulospinal Reflexes (VSR) and Vestibulocerebellar Loops (VCL) are of very high priority in relationship to postural distortion, muscle tone balance, and spinal function. Dysfunction of the VOR, VSR, and VCL can lead to imbalance of descending neurological activity to postural and spinal muscles resulting in significant distortion with concomitant pain and dysfunction. Dysfunctional VOR, VSR, and VCL can be easily evaluated and treated using manual muscle testing, manipulative therapies and therapeutic exercise.

Key Indexing Terms: Manual Muscle Testing, Vestibulo-Ocular Reflexes, Vestibulospinal Reflexes, Professional Applied Kinesiology, Vestibular System

INTRODUCTION:
The vestibular system has four main functions: sensation and perception of position and motion, orienting the head and body to vertical, controlling the body's center of mass, and stabilizing the head during postural movements. To attain an appropriate postural response, convergence of sensory information from the vestibular, somatosensory, and visual systems is needed to align the body with respect to earth vertical.

The human vestibular system is made up of three components: a peripheral sensory apparatus, a central processor, and a mechanism for motor output. The peripheral sensory apparatus consists of a set of motion sensors that send information to the central nervous system, specifically the vestibular nuclear complex and the cerebellum, about head angular velocity and linear acceleration. The central nervous system processes these signals and combines them with other sensory information to estimate head and body orientation.

The output of the vestibular system goes to ocular muscles and the spinal cord to serve three important reflexes, the vestibulo-ocular reflex (VOR), the vestibulocolic reflex (VCR), and the vestibulospinal reflex (VSR). The VOR generates eye movements that enable clear vision while the head is in motion. The VCR acts on the neck musculature to stabilize the head. The VSR generates compensatory body movement in order to maintain head and postural stability and thereby prevent falls.

Integration of the vestibular system takes place in the vestibular nuclei, areas of the brain stem reticular formation, areas of the mesencephalon reticular system, all functional areas of the cerebellum, various nuclei of the thalamus, and multiple areas of the cerebral cortex. In the vestibular nuclear complex, processing of the vestibular sensory input occurs concurrently with processing of extra vestibular sensory information, including proprioceptive, visual, tactile, and auditory.[1] Receptors that provide information used for postural control are proprioceptors in the legs, spine and neck, cutaneous receptors on the sole of the foot, vestibular receptors in the inner ear, and photoreceptors in the retina.[2]

The vestibular system transduces the forces associated with head acceleration and gravity into a biological signal. The control centers of the brain use this signal to develop a subjective awareness of head position in relation to the environment and to produce motor reflexes for equilibrium. The performance of the VOR, VCR, and VSR is monitored by the central nervous system, is readjusted as necessary by the cerebellum, and is supplemented by slower but more capable higher cortical processes.[3]

Extensive connections between the vestibular nuclear complex, cerebellum, ocular motor nuclei, and brainstem reticular activating system are required to formulate appropriate efferent signals to the VOR and VSR effector organs, the extra ocular muscles, and skeletal muscles. Output neurons of the VOR are the motor neurons of the ocular motor nuclei complex (CN's III, IV, VI), which drive the extra ocular muscles. Output neurons of the VSR are the anterior horn cells of the spinal cord gray matter, which drives skeletal muscles.

The lateral vestibulospinal tract, which comes from the lateral vestibular nucleus, reaches all levels of the cord. These fibers exert an excitatory action on both alpha and gamma motor neurons. The vestibulospinal tract acts primarily on motor neurons in the medial part of the ventral horn, that is, axial muscles and proximal muscles of the extremities. Thus the lateral vestibulospinal tract can adjust the contraction of muscles that oppose the force of gravity (antigravity muscles). The medial vestibulospinal tract is primarily important for mediation of reflex head movements.

Maintenance of equilibrium and posture in everyday life is a complex function involving multiple receptor organs and neural centers in addition to the labyrinths. As a sensor of gravity, the vestibular system is one of the nervous system's most important tools to control posture. The vestibular system transforms forces associated with head acceleration and gravity into electrical signals that travel directly to motor centers for postural and ocular stability, making it both a sensory and motor system. Additionally, visual and proprioceptive reflexes, in particular must be integrated with vestibular reflexes to ensure postural stability.[4]

Each sensory system contributes different and necessary information.[5] The visual system signals the position and movement of the head with respect to surrounding objects. The somatosensory system provides information about the position and motion of the body with respect to the support surface and about the position and motion of body segments with respect to one another. The somatosensory system can also provide information about how body segments align with respect to each other and the support surface through sending information about muscle stretch and joint position at the ankle or more proximal joints.

Patients often present with vestibular dysfunction that does not represent obvious clinical signs yet results in postural distortions and muscle imbalances with consequent pain and discomfort. These patients are suffering from subclinical vestibular dysfunction, or a functional disorder of the vestibular system.

Clinical vestibular patients present with vertigo, balance, and autonomic problems that are the result of frank vestibular pathology. With appropriate training, these patients are easily identified. However, diagnosis of the exact cause is complex and requires advanced training, therefor is not within the scope of this paper. Here, we are going to address more functional and dysfunctional aspects of the vestibular system.

Patients with vestibular system dysfunction will often present with neck or back pain and what they might think is incidental vague dizziness. Upon further investigation these patients reveal that they are light headed, nauseous, the world is spinning or they are spinning, occasional double vision, un-coordination, ataxia, and the list can go on and on. In other words, patients that present with common musculoskeletal complaints, autonomic and other seemingly unrelated disorders are actually vestibular patients.

When the biological signals from the vestibular system are distorted, there is a direct effect on the relationship of the head on the body and the body and head in relation to the earth's gravitational forces. Such an aberrant relationship will result in postural distortions and shifts in centers of gravity as well as segmental and spinal distortion.

Vestibular, visual, and somatosensory signals influence the organization of a normal postural response. When any one of these signals is lost or distorted, a central reweighting occurs so that the remaining sensory inputs are used

to elicit postural reactions, albeit in some altered fashion.[6]

Postural distortions are ultimately the concomitance of changes in muscle tone and relationships of muscle groups with each other. In other words, flexor and extensor tonal balance may be disturbed or the relationship of extensors on one side with the other will be disturbed. These unbalanced muscular forces ultimately result in segmental dysfunction, central maintenance of segmental dysfunction and pain.

Spinal distortion is a function of a lack of cerebellar inhibition on the vestibular nuclei and the vestibulospinal tract. In essence, one vestibulospinal tract is firing more than the other, resulting in lateral distortion and centrally maintained subluxations, as well as scoliosis type patterns. In support of this concept, it is well understood that the medial and lateral eye muscles are embryological homologues to the medial and lateral paraspinal muscles. The vestibular pathways that control the eyes and vertebrae are the same. The pathways to the eyes are the medial longitudinal fasciculus and to the vertebrae the medial and lateral vestibulospinal tracts.

When movement or positional changes are made, normal muscle facilitation and inhibition patterns take place to maintain an upright position and balance in relationship to the earth's gravitational field. These particular inhibition and facilitation patterns are very predictable. When in the neutral stance position with the head tilted back, axial and proximal limb extensors are naturally facilitated and flexors inhibited, and the opposite occurs when the head is tilted forward. When the head is tilted to one side, contralateral flexors are inhibited and ipsilateral extensors are facilitated. These inhibition and facilitation patterns are the result of normal medial and lateral vestibulospinal tract function.

The semi circular canals are associated with rotational movement and the utricles and saccules are associated with linear movement. Also the utricles and saccules are associated with static positions of the head, such as flexion and extension. When testing is done in the static position, such as the head tilted back or forward, the emphasis of the challenge is to the otolith function in the utricles and saccules. When the head is put into motion, such as testing of the VOR, the emphasis of the challenge is on the semicircular canals. When one is ambulating, both rotational and linear forces are involved; therefore both semicircular canals and the utricles and saccules are involved.

Systemically, vestibular dysfunction has far reaching effects. Through various thalamic and cerebellar pathways the vestibular system integrates into the sensory cortex, limbic system and autonomic nuclei in the brain stem. When there is vestibular over activity, such as motion sickness, one will experience this particular integration. When one falls or looses balance, especially the elderly, one will experience the limbic association.

Taking into consideration the global effect a dysfunctional vestibular system and associated pathways, such as the vestibulospinal tracts, VOR and vestibulocerebellar pathways, have on segmental position and movement, it makes sense to evaluate and correct vestibular function early on before other segmental corrections are considered.

Upon correction of vestibular dysfunction, normalization of posture can be observed, and visual tracking of moving objects and general range of motion will be improved. Additionally, pain associated to muscle imbalances and aberrant segmental motion will be decreased, and centrally maintained subluxations will resolve.

The vestibular system, including the semicircular canals, utricles, and saccules, measures rotation and linear motion as well as changes in static position. These are functions that are easily applied to manual muscle testing. Considering that the vestibular system ultimately modulates tone and function of many large muscle groups, it lends itself to easy and efficient evaluation with manual muscle testing. As previously mentioned, both medial and lateral vestibulospinal systems are associated to inhibition and facilitation of proximal limb and axial muscles, which readily lend themselves to manual muscle testing.

Since the vestibular system utilizes information from other sensory modalities in addition to the vestibular mechanism itself, removal of one of the other modalities puts more emphasis on the vestibular mechanism itself for input. For example, when the eyes are closed there is more emphasis put on input from the vestibular apparatus and its inputs into the cerebellum. Therefore, this pathway can be challenged and tested by having the patient stand and simply close their eyes. If the vestibular mechanism is not up to the task or is not getting appropriate input from other sensory modalities, there will be conditional inhibition of either flexors or extensors. This challenge most likely tests the vestibulocerebellar loops (VCL). If one source of sensory input is unreliable its contribution tends to be ignored and information from other sources becomes more important. Therefore, closing the eyes makes other sources suddenly more important and if their system not up to the task, conditionally inhibited muscles will be the result.

With the patient standing, extension of the neck, or tilting the head backwards, should normally facilitate extensors bilaterally and inhibit flexors bilaterally. Tilting the head towards one shoulder should facilitate the ipsilateral extensors and inhibit the contralateral extensors. Tilting the head forward towards the chest should facilitate bilateral flexors and inhibit bilateral extensors. These motions should involve mostly medial vestibulospinal tracts. A more direct test of the lateral vestibulospinal tract is to have the patient simply touch their knees then stand upright again. That motion should normally facilitate bilateral axial extensors and inhibit bilateral axial flexors.

The VOR is easily tested because it is most active during normal gait. Additionally, the VOR circuits are modulated by cortical activity. With the VOR's relationship to gait and the cortex, it lends itself to testing using brain related supraspinatus and gait inhibition/facilitation patterns.

Vestibulo-ocular dysfunction is identified by putting the patient in the standing gait position, having them turn their head slightly opposite the forward leg, and looking opposite the head turn with their eyes. If this position disrupts the normal inhibition and facilitation pattern of gait, it is an indicator that the VOR is dysfunctional. VOR is easily challenged by having the patient focus on an object such as the examiner's finger and turn the head side to side or up and down then test muscles associated to cortical function such as the supraspinatus and muscle of gait. If the patient is tested with the object of focus far enough away that the eyes do not converge, the test are more specific to rotational forces and the semicircular canals. If the object is close enough to converge the eyes, the motion is more linear and tests more of the utricle and saccule.

If the normal facilitation and inhibition patterns of the previously challenged systems do not take place, therapy localization (TL) is done to identify areas of the nervous system that may be involved. For example, the mastoid processes and other segmental are therapy localized to see if the conditional inhibition or facilitation patterns are normalized. Once an area of dysfunction is localized, pinch and rub modalities can be utilized to determine the appropriate treatment modalities. For example, if the area that TL's responds to rubbing, then injury recall technique (IRT) is utilized.[7] If the area responds to pinching, then manipulation is utilized. Finally, if neither rub nor pinch normalizes the aberrant pattern, rehabilitation exercises are utilized.

Based on the function of the VCL, medial and lateral vestibulospinal tracts, and VOR, there is a natural progression to testing and treatment. The patient is placed in the standing position and asked to close their eyes then both extensors and flexors are tested. All corrections are made until the tests are normal. Next, the patient is asked to bend forward and touch their knees, challenging the lateral vestibulospinal tract. Again all corrections are made until the test is normal. Next, the patient is tested with the head in the extended position, then the flexed position, and the right and left tilt positions. Again, all corrections are made until tests are normal. Finally, the patient is tested for VOR dysfunction with vertical and horizontal rotations. Test and correct until all tests are normal.

The purpose of this paper is to address functional or subclinical dysfunction of the vestibular system that is related to or results in common clinical complaints, provide functional evaluation methods based around Applied Kinesiology manual muscle testing, and demonstrate treatment methods using manual manipulation, injury recall technique, and rehabilitation exercises.

REVIEW OF PHYSIOLOGY:

The vestibular system is composed of three basic functional components, the peripheral afferent input network, and integration system that analyses the input, and an output mechanism that allows a motor response.[8] The vestibular system by means of its receptors from the perception of linear and angular acceleration plays a central role in orientation.[9] The vestibular system monitors the forces associated with angular and linear acceleration by means of five organs located within the labyrinthine cavities of the temporal bones of each side of the skull. The saccular and utricular macules sense linear acceleration, and the cristae of the three semicircular canals sense angular acceleration of the head.[10]

The vestibular apparatus consists of five labyrinthine sensory organs, the three semicircular canals, and two otolith organs (utricle and saccule). Each labyrinth contains three semicircular canals namely, the right and left anterior, posterior and horizontal, which detect angular acceleration. The semicircular canals provide sensory input about head velocity, which enables the VOR to generate an eye movement that matches the velocity of the head movement. The otoliths register forces related to linear acceleration, and they respond to both linear head motion and static position with respect to the gravitational axis.

Signals from the utricle and saccule elicit tonic reflex effects, whereas phasic responses are caused by signals from the semicircular canals when the stimulus is rotation of the head. In addition, otoliths in the saccule and utricle sense linear acceleration and vertical linear accelerations of the head. For example, head translation generated during deep knee bends are sensed by the saccule otoliths, and horizontal linear accelerations, like the translations of the head generated during walking forward, are sensed by the utricular otoliths.[11] The utricles record especially lateral tilt, whereas the saccule probably records mainly flexion and extension.[12] Because static sensitivity is a property of the utricle and saccule, these parts of the vestibular apparatus are called the static labyrinth.

Vestibular nerve fibers are the afferent projections from the bipolar neurons of Scarpa's ganglion (vestibular). The vestibular nerve transmits afferent signals from the labyrinths along its course through the internal auditory canal. The vestibular nerve enters the brainstem at the pontomedullary junction.

Vestibular signals originating in the two labyrinths first interact with signals from other sensory systems at the neurons of the vestibular nuclei. Only a fraction of the neurons receive direct vestibular connections and, with the exception of the interstitial nucleus of the vestibular nerve, the neurons that receive primary vestibular afferent fibers also may receive afferents from the cervical area, the cerebellum, the reticular formation, the spinal cord, and the contralateral vestibular nuclei.[13]

Three major white matter pathways connect the vestibular nuclei of the anterior horn cells of the spinal cord. The lateral vestibulospinal tract originates from the ipsilateral medial vestibular nucleus, which receives the majority of its input from the otoliths and cerebellum, generating antigravity postural motor activity. The medial vestibulospinal tract originates from the contralateral medial, superior, and descending vestibular nuclei and mediates ongoing postural changes or head righting in response to semicircular canal sensory input. The vestibulospinal tracts have a strong effect on the muscles that contribute to equilibrium and posture.

The vestibular nuclear complex is composed of two sets of four nuclei located bilaterally just inferior and medial to the inferior cerebellar peduncles. Each set contains medial vestibular nuclei, lateral vestibular nuclei, inferior

vestibular nuclei, and superior vestibular nuclei. Although receiving direct inputs from the peripheral labyrinths, the vestibular nuclear complex also receives visual and somatosensory inputs. Convergence of vestibular and somatosensory inputs on the vestibulospinal and reticulospinal neurons can take place at the level of the vestibular nuclear complex, at the adjacent reticular formation, and upon spinal interneurons and motor neurons. The vestibular nucleus is therefore not simply a relay station for vestibular signals but rather an important sensory motor interaction center.[14] Motor output pathways leave the vestibular nuclei and descend in the spinal cord where they terminate on the neurons that activate neck, trunk, and limb muscles. The medial vestibulospinal fibers do not reach below the upper thoracic cord.

Vestibulospinal tracts are part of the extrapyramidal system, which also includes the rubrospinal, reticulospinal, and tectospinal tracts. The reticulospinal tract receives sensory input from all of the vestibular nuclei as well as from all of the other sensory and motor systems involved with maintaining balance. The reticulospinal tract is probably involved in most balance reflex motor actions, including postural adjustments, made to extra vestibular sensory input (auditory, visual, and tactile stimuli).[15] The reticulospinal tract receives sensor input from all the vestibular nuclei as well as from all of the other sensory and motor systems involved with maintaining balance.[16] Facilitatory centers to extensors are vestibular nuclei and the rostral reticular formation. Where as, inhibitory centers are the frontal cortex, caudal reticular formation and basal ganglia.[17]

The vast majority of fibers in the lateral vestibulospinal tract originate from neurons in the lateral vestibular nucleus (Dieter's). The tract terminates throughout the length of the cord, either directly or indirectly on anterior horn cells of the axial and proximal limb musculature.[18] The lateral vestibulospinal tract receives the majority of its input from the otoliths of the saccule and macule and the cerebellum, this pathway generates antigravity postural motor activity. The medial vestibulospinal tract mediates ongoing postural changes or head righting in response to semicircular canal sensory input.[19] The medial vestibulospinal tract descends only through the cervical spinal cord in the medial longitudinal fasciculus and activates cervical axial musculature. Neurons in the medial vestibular nucleus receive afferent fibers from the semicircular canals as well as from the fastigial nucleus and flocculus of the cerebellum.[20]

The reflex center of the neck is located in the medulla, and the effects on the motor neurons are more likely mediated by both the reticulospinal and vestibulospinal tracts.[21] Efferent connections of the vestibular nuclei include motor neurons of the spinal cord, motor neurons in the nuclei of the extra ocular muscles, and the cerebellum.

The superior vestibular nucleus is an information relay center for ocular reflexes mediated by the semicircular canals.[22] Axons from the neurons in the superior vestibular nucleus run in the ipsilateral and contralateral median longitudinal fasciculus (MLF) to innervate the motor nuclei of the external eye muscles, others project to the cerebellum and the dorsal portion of the reticular formation.[23]

Because of its projections in the MLF to the extra ocular muscles and the cervical cord, the medial vestibular nucleus appears to be an important center for coordination eye, head and neck movements.[24] Efferent connections from the medial nuclei run in the descending MLF to the cervical and thoracic spinal levels by way of the medial vestibulospinal tract. Additionally, efferent fibers pass to the ascending MLF bilaterally to reach the nuclei of the oculomotor nuclei. Other efferents are distributed to the vestibular cerebellum and the reticular formation, and contralateral vestibular nuclei.[25] The lateral nucleus also sends efferent fibers bilaterally to the MLF, which connect to the various ocular nuclei.[26] Projections from the medial vestibular nucleus ascend in the medial longitudinal fasciculus to synapse in the oculomotor, trochlear, and abducent nuclei (CN III, IV and VI).

Dysfunction in the vestibulospinal system can be divided into two categories: distortion and deficiency.[27] A deficiency in the system usually implies that the sensory inputs have been reduced or abolished. Distortion means

that the signal is present, but is disturbed, and does not correspond with expectations about the sensory feedback. In humans, evidence suggests that multiple cortical areas receive vestibular stimulus.[28] Vestibular information seems to be processed in distributed central network, not a single center. It is connected with other networks that control movements, attention, emotions, and pain.[29] Additionally, research has demonstrated that the anterior cingulate, insula, and putamen are activated during caloric stimulation of the semicircular canals.[30]

The vestibulocortical pathways via the thalamus are concerned with body position and orientation in space. Thalamic units that receive vestibular signals are also activated by proprioception and visual stimuli.[31] The vestibulo-thalamo-cortical projections appear to integrate vestibular, proprioceptive, and visual signals to provide one with conscious awareness of body orientation.[32] In other words, inputs from the semicircular canals, otolith organs, visual system, and somatosensory system are combined centrally in the vestibular nuclei to give the brain's best estimate of head movement. The vestibular system transduces the forces associated with head acceleration and gravity into a biologic signal. The control centers in the brain use the signal to develop a subjective awareness of head position in relation to the environment and to produce motor reflexes for equilibrium.[33]

Vestibular activity can be found in multiple cortical regions, but it is felt that the parieto-insular-vestibular is the center of the vestibular cortical network. Vestibular signals to this region mostly originate from the semicircular canals.[34] Vestibular activation furthermore occurs in the premotor cortexes, which make up one of many reciprocal connections between the cortex and vestibular nuclei.

The cerebellum contains three distinct areas that perform an analogous function for three different neuronal output centers. The oldest of these areas located in the bottom of the cerebellum near the medulla is referred to as the archicerebellum, vestibulocerebellum, vermus, or the flocculnodular lobe. This area interacts with the vestibular nuclei in the brain stem to control balance and equilibrium. The purkinje neurons in this area project their axons directly to the vestibular nuclei, the only area where cerebellar output comes from other than the cerebellar nuclei. The vestibular nuclei can actually be viewed as the output nuclei for the archicerebellum. Input from both sides of the body enters both the left and right hemisphere of the archicerebellum. Full body input is required for maintenance of posture and balance. Counter-balancing movement on one side of the body with offsetting movement on the other side is a mainstay of the archicerebellum operation.[35] For the purpose of this discussion and simplicity the archicerebellum, vermus, and flocculnodular lobe will be referred to as the *vestibulocerebellum.* The next area of the cerebellum to evolve is called the *paleocerebellum,* which is located at the top of the cerebellum and sends its output to the motor output nuclei in the brain stem. Proprioceptive input from the entire body is received here and cerebellar nuclei provide input to brainstem nuclei providing unconscious skeletal control (reticulospinal tract). The *neocerebellum* occupies the posterior lobe of the cerebellum and interacts with the motor cortex to control learned voluntary movement. Neocerebellum input is received from pontine nuclei in the pons and lower midbrain that relay output from the entire cerebral cortex. Neocerebellar nuclei project to the motor output portion of the cerebral cortex though the thalamus.

The vestibulocerebellum nucleus receives input from secondary vestibular neurons, the spinal cord, and the pontomedullary reticular formation. The result is a close-knit vestibular-reticular-cerebellum functional unit for the maintenance of equilibrium and locomotion.[36] Most axons of the vestibular nerve synapse on the vestibular nuclei, but some of the axons continue via the inferior cerebellar peduncle to synapse in the cerebellum. All the vestibular nuclei form reciprocal projections with the vestibulocerebellum.

The cerebellum is not a skeletal output structure, as it does not project directly to the motor neurons that drive muscle cells. It modulates the motor neurons by providing input to the neural structures that produce skeletal motor output. In other words, cerebellum supports and modulates the areas of motor control. The vestibulocerebellum serves the most primitive function of the cerebellum, which receives extensive inputs from sensory receptors throughout the head and body, and provides us with spatial coordinates for the purpose of spatial coordination and self-awareness.

Performance of the ocular motor system undergoes constant recalibration and readjustment to assure optimal visual capabilities. The cerebellum plays an important role in this adaptive control of eye movements. Retinal sensory information reaches the inferior olives by way of the accessory optic tract and the central tegmental tract, then the cerebellum where they activate purkinje cells in the vestibulocerebellum and other adjacent areas. The aforementioned parts of the cerebellum also receive primary vestibular afferent fibers and secondary vestibular fibers originating mostly in the medial and descending vestibular nuclei. Outflow from the cerebellar purkinje cells terminates at secondary vestibular neurons and neurons in the adjacent reticular substance.[37] Additionally, the cerebellum can adjust the vestibulo-ocular reflex to changing external conditions. The magnitude of the reflex response (not the response itself) to a certain postural stimulus depends on signals to the vestibular nuclei from the cerebellum.[38]

The reticulospinal tract originates from neurons in the bulbar reticular formation but is heavily influenced by vestibular inputs. The spinal cerebellum provides a major source of input to neurons which axons form the lateral vestibulospinal and reticulospinal tract. The reticulospinal tract is where inhibition opposite vestibulospinal facilitation comes from. In other words, if extensors are facilitated by vestibulospinal activity, reticulospinal activity inhibits flexors.

The vestibulo-autonomic reflexes are modulated through widespread areas of the neuraxis by the vestibulocerebellar system. Vestibulo-sympathetic reflexes are varied in nature due to extensive interaction between the vestibular system, midline components of the cerebellum, and autonomic control centers.[39]

Neurons in the caudal vestibular nuclei project to medullary regions known to participate in regulation of blood pressure, heart rate, and breathing. There are also connections from the vestibular nuclei to the locus ceruleus, area postrema, hypothalamus, amygdala, and limbic cortex, all of which lead to the fear, panic, and motion sickness that accompany vertigo.[40]

Major regions that mediate autonomic function and receive inputs from the vestibular system include the nucleus tractus solitarius, parabrachial nucleus (pons and midbrain), hypothalamic nuclei, dorsal motor nucleus, nucleus ambiguous, locus ceruleus, caudal and rostral ventrolateral medulla (CVLM, RVLM).[41] The effect of vestibular activation on the sympathetic system is mediated largely through the CVLM and RVLM. The RVLM is a region of the medullary reticular formation that contains tonic vasomotor neurons that exert tonic excitation on the intermediolateral cell column (IML). Tonic excitation of the IML results in an overall increase in sympathetic tone. The CVLM can be activated by the vestibular system and higher nervous system directly or indirectly by the NTS.[42]

Cervical manipulations cause modulation of vestibulo-sympathetic pathways.[43] Also cervical manipulations cause vestibulocerebellar activation of the nucleus tractus solitaries, and dorsal motor nucleus of the vagus.[44] It is also of interest that the orthostatic response is not only dependent on baroreceptor activity, but also on the vestibulo-sympathetic reflexes.

The vestibular system stabilizes gaze and ensures clear vision during head movements, especially those that occur during locomotion.[45] Sensory information from the semicircular canals directs the eyes to move in a direction opposite to the head movement. During locomotion there is a translation and corresponding rotation of the head in both the vertical and horizontal planes. The frequency and magnitude of these movements are normally within the operational range of the VOR. Most natural head movements are composed of a combination of linear and angular displacements so that the canal and otolith-ocular reflexes must work together to insure steady fixation.[46]

The semicircular canals respond to angular acceleration and the otoliths respond to linear acceleration. Together they produce the inputs for vestibulo-ocular reflex. The VOR has two components, angular VOR, mediated by the semicircular canals, compensates for rotation, linear VOR mediated by the otoliths, compensates for translations. The angular VOR is primarily responsible for gaze stabilization. The linear VOR is most important when near targets are being viewed and head is being moved at relatively high frequencies.[47]

The VOR responds to the three possible directions of head rotation, producing horizontal, vertical, and torsional eye movements. Both the translational and rotational VOR perform optimally in response to brief, high frequency motion of the head. The angular VOR depends on the semicircular canals, and translational VOR depends on the otolitic organs (utricle and saccule).[48]

The action of the vestibulo-ocular movements can be appreciated by fixating on an object and moving the head from side to side, the eyes automatically compensate for the head movement by moving the same distance and at the same velocity but in the opposite direction, thus keeping the image of the object at more or less the same place on the retina.

The vestibular nuclear complex consists of four major nuclei, superior, medial, descending, and lateral. The superior and medial nuclei are relays for the VOR. The medial is also involved in the VSR, and coordinates head and eye movements that occur together. The lateral is the principal nucleus for the VSR. Fibers to the nuclei of the extra ocular muscles arise mainly in the superior and medial nuclei, which receive primary afferents from the semicircular canals. These fibers leave the nuclei and join to form the medial longitudinal fasciculus (MLF).

Vestibular deficits result in the need for other mechanisms to get involved. There is a substitution of another sensory input to drive the same motor response. There is considerable variability among subjects as to which particular mechanism are primarily used for compensation.[49] Because the vestibular system relies so heavily on sensory input, it can be deemed as both a sensory and motor system.

The vestibular system differs from other systems in its high level of multisensory integration. Vestibular, visual, and somatosensory signals influence the organization of a normal postural response. When any one of these signals is lost or distorted a central reweighting occurs so that the remaining sensory inputs are used to elicit postural reactions, albeit in some altered fashion.[50]

Because the vestibular receptors inform only about the head, other receptors must inform about the movements and positions of other body parts. Growing evidence suggests that correct alignment of the head with the trunk and with gravitational vertical requires that the vestibular system receive ascending somatosensory inputs.[51] The vestibular complex receives afferents from other parts of the CNS, especially the spinal cord, the reticular formation, certain mesencephalic nuclei, along with the cerebellum, and cerebral cortex.[52]

To control our upright position, the brain must integrate these various sources of in formation and issue commands that are appropriate for the whole body. Labyrinthine reflexes must operate in concert with other postural reflexes.[53]

There are two primary targets for vestibular input from primary afferents, the vestibular nuclear complex and the cerebellum. The vestibular nuclear complex is the primary processor of vestibular input and responds with motor output. The cerebellum is the adaptive processor, monitoring vestibular performance and readjusting central vestibular processing if necessary. The cerebellum, a major recipient of outflow from the vestibular nuclear complex, is also a major source of input itself.

As previously mentioned, dysfunction in the vestibulospinal system can be divided into two categories, distortion and deficiency. A deficiency in the system usually implies that the sensory (labyrinthine) inputs have been reduced or abolished. Distortion means the signal is present but disturbed and does not correspond with expectations about the sensory feedback.[54]

When the head of a healthy subject is stationary, the right and left vestibular nerves and nuclei show resting discharge rates (vestibular tone) that are balanced.[55] Symptoms and signs of labyrinthine lesions can largely be tied to asymmetric tone or loss of function within the vestibular reflex pathway.[56] When there is asymmetric tone in the vestibular system, simultaneous therapy localization to the mastoid processes will disrupt normal gait inhibition and facilitation patterns. When there is unilateral dysfunction of the vestibular system, unilateral therapy localization to the mastoid processes will disrupt normal gait inhibition and facilitation patterns. Interestingly, therapy localization to the mastoid processes does not reveal VOR dysfunction. However, VOR dysfunction is easily detected by activation in the standing gait position.

Natural head movements consist of a combination of rotation and translation. For images to remain stable on the retina, reflexes must compensate for both types of movement. Normal gait requires that a combination of rotation and translation take place to stabilize images while walking. While viewing of near targets eye rotations are greater than head rotation because the eyes do not lie in the center of the head.[57] If one fixes upon a near object there must also be an adjustment for the translational component of head rotation. Viewing a near object while testing, at a distance that results in convergence of the eyes, challenges translation more than rotation. Viewing of an object that is far enough away to avoid convergence challenges rotation more than translation.

Because one of the main functions of the VOR is to keep objects focused on the fovea during ambulation, dysfunction of the whole system is expressed as gait dysfunction. In other words, rotational or translational VOR can be challenged by head rotation. Then have the patient step into the gait position to test normal inhibition and facilitation patterns. If there is disruption of the normal patterns, it can be assumed that there is VOR dysfunction.

The rotational VOR involves the activity of many nuclei and countless number of neurons, which group behavior, and may differ from that of the isolated units.[58] Because of the complexity of rotational VOR individual lesions are very difficult to localize, consequently VOR dysfunction must be looked upon as a systemic dysfunction. Therefore, vestibulo-ocular dysfunction must be treated as dysfunction of a system and not as individual lesions.

Patients with well-compensated vestibular losses can use either visual or somatosensory information to orient the body. Removal of visual or somatosensory input in compensated vestibular dysfunction will increase the load on the vestibular apparatus exposing dysfunctional patterns. Visual information is thought to be redundant unless both vestibular and somatosensory inputs are lost.[59] When other sensory inputs such as proprioception or visual input are decreased there is more reliance on vestibular function. This phenomenon is important because vestibular challenges involve removing sensory input, such as vision.

Visual signals relayed through the cerebellar flocculus to neurons in the superior and medial vestibular nucleus modulate the activity of the VOR.[60] Vestibulo-ocular adaptation and compensation depend upon the integrity of a number of structures, including the cerebellum.[61] Critical involvement of the cerebellum in the VOR mechanism makes it possible to treat dysfunction with modalities such as manipulation and eye exercises. Because vestibulospinal tract function is heavily modulated by the cerebellum treatment directed at the cerebellum is very effective.

The second order vestibular neurons mostly use glutamate as their excitatory and GABA as their inhibitory neurotransmitters.[62] Signal processing in the secondary vestibular neurons depends not only on anatomical connectivity, but also on the type of synaptic receptors expressed and neurotransmitter released. Cerebellar

purkinje neurons inhibit cerebellar output neurons with GABA. Unlike the lateral vestibulospinal tract, many of the fibers of the medial vestibulospinal tract are inhibitory, probably using glycine as a neurotransmitter.[63] The entire cerebellum receives serotonin from reticular nuclei and norepinephrine from the locus ceruleus.

The endocrine system is intimately involved in neurotransmitter function. Hormones such as progesterone and testosterone as well as adrenal corticosteroids and thyroid hormones affect neurotransmitter receptor site sensitivity.

Considering the extended reach and complexity of the vestibular system it is easy to see that nearly all of the major neurotransmitters are involved. When vestibular dysfunction returns after repeated therapeutic intervention it is necessary to evaluate neurotransmitter and associated endocrine function to achieve long-term effects.

CLINICAL PROCEDURE:
The procedure of testing and correcting vestibular reflexes is best accomplished in the sequence of vestibulocerebellar loops, medial and lateral vestibulospinal tracts, and the vestibulo-ocular reflexes.

Presence of both vestibulocerebellar and vestibulospinal dysfunction is indicated by TL to the mastoid processes while in the standing gait position. If dysfunction is present the normal gait inhibition pattern will be disrupted or conditionally facilitated. Treatment of the vestibulocerebellar loops and vestibulospinal pathways should proceed until therapy localization to the bilateral mastoid processes is no longer positive.

Presence of vestibulo-ocular dysfunction is indicated by putting the patient in the standing gait position and having them turn their head opposite the forward leg and look opposite head rotation with their eyes. If the normal gait inhibition pattern is conditionally facilitated or disrupted, VOR dysfunction is present.

Treatment includes three modalities, IRT, manipulation, and rehabilitation exercises. There are indicators that guide the practitioner to the appropriate modality. If rubbing of the involved segment normalizes dysfunctional pattern, then IRT is indicated. If pinching of the involved segment normalizes the dysfunctional pattern, then manipulation is indicated. Finally, if rubbing or pinching do not correct abnormal pattern, rehabilitation exercises are indicated.

Testing and treatment of dysfunctional vestibulocerebellar loops is done initially by having the patient stand in the neutral position with their eyes closed. An extensor muscle such as the latissimus dorsi is tested for normal facilitation and a flexor such as the pectoralis major clavicular is tested for normal facilitation. If the normal facilitation pattern is not present, dysfunction of the vestibulocerebellar loops is indicated. Next use TL to determine the involved segments, starting with the mastoid processes. Once the involved segments have been identified, determine treatment modality with ‘pinch and rub’ and treat as indicated. Next, put the patient in the gait position with their eyes closed and check for the normal inhibition pattern. If the normal inhibition pattern is disrupted, follow the treatment procedure previously described.

Medial and lateral vestibulospinal tract dysfunction is tested while placing the patient in one of several static positions. These include flexion and extension of the trunk and neck as well as lateral flexion of the neck. First, have the patient bend forward and touch knees then stand erect again. This motion should facilitate axial extensors and inhibit flexors. Second, have the patient tilt the head back. This position should facilitate extensors and inhibit flexors. Third, have the patient flex the head forward. This position should facilitate flexors and inhibit extensors. Finally, have the patient flex the neck laterally. This position should facilitate the extensor on the side the head is flexed towards and inhibit the opposite extensors. If there is a deviation from these normal inhibition and facilitation patterns, use TL to determine the involved segments, starting with the mastoid processes. Once the involved segments have been identified, determine treatment modality with ‘pinch and rub’ and treat as indicated.

Testing and treatment of the VOR is done in several phases that elicit rotational and linear motion. These tests challenge the semi circular canals and the otoliths of the utricles and saccules with rotational and linear motion respectively. In the neutral position the patient is instructed to focus on a stationary object, such as the examiners finger, and rotate the head side to side. This is a horizontal VOR that tests rotational motion. In the neutral position the normally facilitated supraspinatus muscle is tested for inhibition. In the gait position normally inhibited muscles are tested for conditional facilitation.[64] Next, the patient is instructed to flex and extend the neck while focusing on a stationary object, which is the vertical VOR providing rotational motion. Again, supraspinatus and gait muscles are tested as previously described. Next, the horizontal and vertical VOR are tested in the same manner, but with the stationary object close enough to cause convergence of the eyes, which is testing linear motion. If there is a deviation from normal inhibition and facilitation patterns, use TL to determine the involved segments, starting with the mastoid processes. Once the involved segments have been identified determine treatment modality with 'pinch and rub' and treat as indicated.

CLINICAL PROCEDURE FLOW CHART:
TESTING PROCEDURES:

- Vestibulo-cerebellar loops
  - Patient standing with eyes closed
    - In neutral position check axial flexor and extensor (pec & lat)
    - In gait position check disruption
      - If inhibition and facilitation patterns are dysfunctional treat as indicated
        - If rub facilitates treat with IRT
        - If pinch facilitates treat with manipulation
        - If rub or pinch do not facilitate perform fixation exercises

- Medial and lateral vestibulospinal system
  - With patient standing
    - Forward bending then standing erect should facilitate extensors and inhibit flexors
    - Neck extension should facilitate extensors and inhibit flexors
    - Neck flexion should inhibit extensors and facilitate extensors
    - Lateral head tilt should facilitate ipsilateral extensors and inhibit contralateral extensors
      - If inhibition and facilitation patterns are dysfunctional treat as indicated
        - If rub normalizes treat with IRT
        - If pinch normalizes treat with manipulation
        - If rub or pinch do not normalize perform fixation exercises

- Vestibulo-ocular reflex (proceed until VOR challenge in standing gait is clear)
  - VOR is tested with horizontal, vertical and lateral head movement while focusing on a stationary object such as examiners finger
  - Perform VOR tests without eye convergence (stimulates canals-angular acceleration), then perform with focal point close enough to converge eyes (stimulates otolith-linear acceleration)
    - Test each of the above separately in the neutral position then the gait position
    - Initially after performing VOR test check supraspinatus in the neutral position
      - If supraspinatus is inhibited treat as indicated
    - After clearing VOR in the neutral position perform VOR challenge and have the patient step into the gait position
      - If gait is disrupted treated as indicated
      - If rub normalizes treat with IRT
      - If pinch normalizes treat with manipulation
      - If rub or pinch do not normalize perform VOR cancelation exercises

Vestibular fixation exercise procedure:

Vestibular fixation exercises are simply done by having the patient hold their thumbs out front placed together with arms extended. Starting with the thumbs in the center, move them to one side while moving the head to the opposite side, keeping the eyes fixed on the thumbs. This movement is done in both directions, or back and forth, for about one minute, or until fatigue, three times a day. In the beginning, it may be necessary to have the patient start the exercise sitting and eventually graduate to standing. If there is a sensation of nausea, start the exercise program with shorter bouts.

VOR cancellation exercise procedure:

Vestibulo-ocular cancellation exercises are done by having the patient fix their eyes on their thumbs while holding them together out front with arms extended, then rotating their head and arms from the center to one side or the other as indicated. The VOR cancellation exercise is usually done to the side that the mastoid process therapy localizes. In other words VOR cancelation exercises are done to one side only. For example, if the right mastoid process therapy localizes, the exercise is done from the center to the right and back to the center. The exercise is done slowly at about one Hz for about one minute three times daily. Again, if the patient is unstable it will be necessary to have them start the exercise sitting.

SUMMARY AND CONCLUSION:

The vestibular apparatus is just one part of the far reaching and complex vestibular system. The vestibular system primarily functions to maintain balance and position in relation to the earth's gravitational field as well as maintain focus of objects on the retina during natural head movements and while we are moving in space.

The vestibular system projects to various cortical areas, including the limbic lobe, cerebellum, and brain stem. Vestibular projections have significant effect on brain stem areas the have autonomic concomitance and visceral function. Vestibular limbic projections can have significant effects on fear and anxiety states, especially in relation to balance and falling.

Vestibular dysfunction affects muscle balance and tone resulting in distortion of the spine and other segmental dysfunction, leading to pain and discomfort. The vestibular system modulates muscular inhibition and facilitation patterns lending itself to evaluation by manual muscle testing.

Patients with functional vestibular disorders often present with symptoms including musculoskeletal complaints, autonomic and visceral dysfunction, as well as anxiety. Patients with seemingly unrelated complaints often have vestibular system dysfunction as the underlying cause.

The vestibular system relies heavily on somatosensory input to function optimally, which enables the practitioner to return optimal function with manipulative therapies and rehabilitation exercises.

As one can conclude from the information presented, manual muscle testing and Professional Applied Kinesiology can be very effective in evaluating functional vestibular disorders and providing lasting correction.

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Clinical Review of Validation of MMT Diagnostics and Complex Therapy with Homeopathic Nosode of Human Chorionic Gonadotropin

Tatiana Chernysheva, M.D., Victoria Galay, Roman Galay

ABSTRACT:
Objective: To assess the effect of electronic homeopathic copy of HGT hormone preparation in correcting status pregnant women.

Materials and Method: We tried to assess the effect of electronic homeopathic copy of HGT hormone preparation in correcting status of 3 pregnant women in the first trimester of pregnancy. They were tested by common laboratory tests, revealed deficiency of HGT hormone. They felt strongly about application of standard allopathic preparations of HGT hormone. MMT diagnostics was used. Informed consent was obtained from each patient.

Results: I made MMT diagnostics and approved deficiency of HGT hormone by special technique of cross TL (showing deficiency or surplus of the target substance). Electronic homeopathic copy of HGT hormone (allopathic preparation) on distillated water was made. Patients were treated by this electronic homeopathic copy during 2 weeks (10 ml/day, per oral). MMT diagnostics became normal. After treatment laboratory tests were repeated and showed normalization of level of HGT hormone. In future these women bore healthy children. Their development is absolutely normal.

Key Indexing Terms: Homeopathic Nosode, Manual Muscle Test, Human Chorionic Gonadotropin, Diagnostics, Treatment, Efficiacy

INTRODUCTION:
Electronic homeopathic copies of various remedies are widely used in AK as so named homeopathic nosodes. The data indicating that electronic homeopathic copies are biophysically different from placebo were obtained early [1]. We also observed similar effect in clinical case correcting status of 3 pregnant women in the first trimester of pregnancy by means of electronic homeopathic copy of human chorionic gonadotropin hormone.

Human chorionic gonadotropin (HGT) is a specific hormone of pregnancy [2]. It is produced by trophoblast cells and it is present in the body throughout pregnancy. In the 1-st trimester of pregnancy HGT provides for progesterone and estrogen production by corpus luteum. The hormones are necessary to support pregnancy. This occurs until the fetoplacental complex becomes capable of independently forming the necessary hormonal environment. In a male fetus HGT stimulates Leydig's cells that produce testosteron, required for formation of male genitalia. In normal pregnancy the concentration of HGT doubles every 1.5 days in between gestation weeks 2-5 (Table). HGT concentration peaks on week 10-11 and then gradually declines. Low HGT concentration may indicate ectopic pregnancy or threatened abortion.

Materials and Method
Three pregnant women at gestational age of about 8 weeks addressed our clinic. Laboratory tests indicated low level of HGT. Normal HGT value for this gestational age is 20000 - 100000 mU/ml, whereas in our patients it amounted to 10000, 13000, 14000 mU/ml correspondingly. Women felt strongly about application of standard allopathic preparation of HGT hormone.

We performed MMT with HGT homepathic nosode (Metabolics UK) and discovered indicator muscle weakness (positive MMT).

After that the author's method of cross-TL was used to determine quantitative state of substance within the body. It was discovered that simultaneous TL in 2 unilateral points (ST22, JB17) causes weakness in any indicator muscle (Figure). When nosode is used and indicator muscle strengthens with left-side TL, this indicates deficiency of substance represented by the nosode. Strengthening indicator muscle with right-side TL indicates it's excess. According to this method, cross-TL was performed on ST22 point near the external edge of the rectus abdominis muscle and JB17 point on the head to the anterior from the parietal tuber.

RESULTS:

When patients were examined we confirmed HGT deficiency, because we observed strengthening of indicator muscle with HGT nosode when TL was performed on the left side. When simultaneous testing was performed by nosode and ampoule of allopathic HGT preparation indicator muscle strengthened, indicating need for treatment by the hormone itself. Tests with nutrients did not produce positive results.

It became clear that it is necessary to copy this preparation to water, but it was necessary to determine the potency for this copying. Several test electronic homeopathic copies were made with even and odd potencies (from 2 to 16 and from 3 to 15), and also a copy with direct transition. Electronic homeopathic copying was performed with the use of the Simulator apparatus (Metabolics UK).

MMT with potentiated electronic homeopathic copies did not cause strengthening of the indicator muscle when presented together with HGT nosode. Only direct electronic homeopathic copy of the allopathic substance produced strengthening of the indicator muscle, similar to that caused by the allopathic preparation.

Fourteen ampoules of direct electronic homeopathic copies of HGT nosode were prepared for each of the patients. Patients were treated by these electronic homeopathic copies during 2 weeks (5 ml, 2 times a day, per os). Informed consent was obtained from each patient for diagnostics and treatment.

After the 2-week course, MMT diagnostics with HGT nosode became normal. Laboratory tests were repeated after treatment and showed normalization of level of HGT hormone. It was approaching upper limit of normal value for this gestational age (95000 mU/ml).

DISCUSSION:

All consequent course of pregnancy was normal. Deliveries occurred on time. Normal children were born (1 boy, 2 girls). They are monitored during 5 years. Their development is absolutely normal.

Thus observation of clinical effectiveness of electronic homeopathic copies of human chorionic gonadotropin proves that electronic homeopathic copies of allopathic remedies (nosodes) can be optionally used for MMT diagnostics and combination therapy of patients with different diseases.

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Table. Human chorionic gonadotropin (HGT) levels during gestation

Gestational age, weeks from conception	HGT level, mU/ml	Median, mU/ml
1 – 2	25 – 300	150
3 – 4	1 500 – 5 000	2 000
4 – 5	10 000 – 30 000	20 000
5 – 6	20 000 – 100 000	50 000
6 – 7	50 000 – 200 000	100 000
7 – 8	20 000 – 200 000	70 000
8 – 9	20 000 – 100 000	65 000
9 – 11	20 000 – 95 000	60 000
11 – 12	20 000 – 90 000	45 000
13 – 14	15 000 – 60 000	35 000
15 – 25	10 000 – 35 000	22 000
26 – 37	10 000 – 60 000	28 000

Figure's legend:

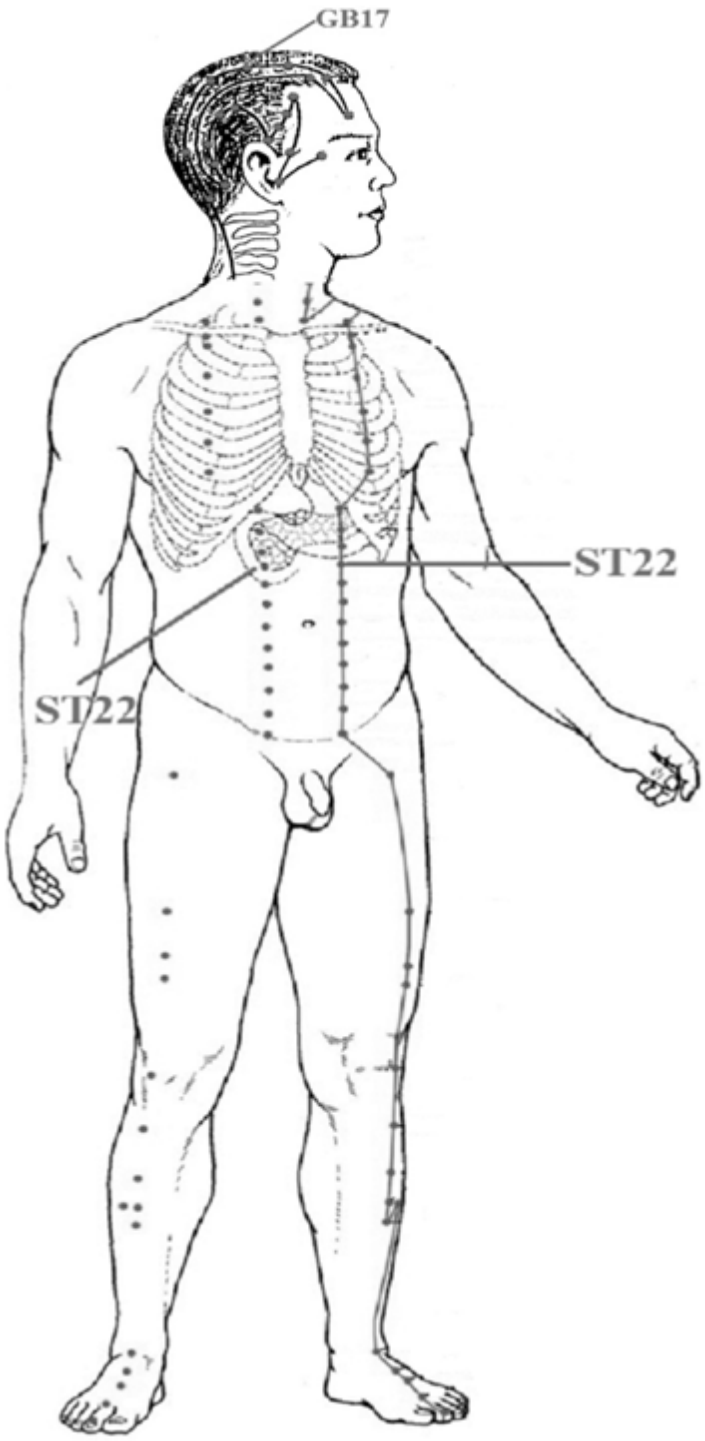

Figure. Location of points ST22, JB17 on human body.

New Findings in Near-Infared Spectral Analysis of Homeopathic Nosodes

Tatiana Chernysheva M.D., Vladimir Korenbaum, Alexander Sergeev, Victoria Galay, Roman Galay

ABSTRACT:
Background: Electronic homeopathic copying is empirically used in AK.
Objective is double-blind estimation and analysis of differences between saline-based electronic homeopathic copies and blank saline carrier in near-infrared absorption spectra.

Materials and methods: Seven types of parent homeopathic substances were studied. Spectra of 19 samples of electronic homeopathic copies of each substance were compared with hidden control by means nonparametric statistics.

Results: Statistically significant distinctions in some wavelengths (from 7 to 17 wavelengths) lying between 3000 nm and 1400 nm were revealeds. A part of revealed wavelengths having statistically significant distinctions re blank saline carrier demonstrated an order in their position being similar to spectral series. Both statistically significant distinctions and a sign of an order in the wavelengths position may be treated in favor of reality of electronic homeopathic copying phenomenon, and consequently confirmation of physical basis of homeopathic nosodes used in AK.

Key Indexing Terms: Homeopathic Nosode, Saline Solution, Electronic Copying, Spectral Analysis, Significant Distinctions, Double Blind Procedure

INTRODUCTION:
There are 2 procedures of preparation of homeopathic remedies: traditional dilution/succussion and so named electronic homeopathic copying ("imprinting") with M. Rae's apparatus. The latter is empirically used in AK to make homeopathic nosodes.

The objective of the study is double-blind estimation and analysis of differences between saline-based homepathic nosodes – electronic homeopathic copies (EHCs) and blank saline carrier (placebo) in near-infrared absorption spectra.

Materials and Method

Seven parent substances were used to produce electronic homeopathic copies on saline solution (5-ml factory-sealed ampoules):
DNA-tox (DNA) – indicator of DNA affection caused by exposure of organism to toxic agents (Manus, Russian Federation);
Bacteria (B) – superposition of 75 pathogenic bacteria (Meripharm GmbH, Germany);
Manus (MAN) – harmonizing nosode (Manus, Russian Federation);
Fungus (FUN) - superposition of 17 pathogenic fungi (Metabolics Ltd, United Kingdom);
Toxic metal (TM) - superposition of 27 salts of heavy metals and toxic metals (Metabolics Ltd, United Kingdom);
Virus (VIR) – superposition of 41 pathogenic viruses (Meripharm GmbH, Germany);
Degeneration (DEG) – superposition of 41 oncologic cultures (Meripharm GmbH, Germany).

Copying was made by means of «Simulator» (Metabolics Ltd, UK) apparatus. It was prepared by 19 ampoules of electronic homeopathic copies of each parent substance and 57 ampoules of placebo (blank saline carrier). Near-infrared spectra (3000 nm – 600 nm) were measured by Varian Cary 5000i (Agilent Technologies, USA) double-beam spectrophotometer in limits of 10 days after production of preparations. Spectral readings of EHCs of each parent substance were compared with 3 groups of blank saline carrier (placebo) by means

of Mann-Whitney non-parametric U-test. Significant distinctions were fixed if statistically sufficient ($p<0.05$) differences were observed re all 3 groups of blank saline carrier and had identical direction.

RESULTS:
Statistically significant distinctions in some wavelengths (from 7 to 17 cases) lying between 3000 nm and 1400 nm were revealed in spectra of EHCs of all parent substances (Table).

Why saline solution was used? The choice of carrier substance was intuitive. It is well known that saline solution is very similar to biological fluids. Therefore we intuitively decided to test saline solution before testing other possible liquid carriers.

Thus every EHC preparation under study is defined as 0.9% solution of NaCl in its chemical structure. Then the statistically significant distinctions in individual wavelengths of EHC spectra are placebo, revealed become even more curious. The first interesting result of the study is that there are such wavelengths for each EHC type. Statistical significance of wavelengths revealed is approved by comparison with the threshold obtained by statistical analysis of differences re 3 placebo groups. Really, there were found no wavelengths where significant differences were observed under comparison of three pairs of placebo groups. Furthermore identical direction of differences of investigated EHCs from all 3 placebo groups amplifies the significance of these distinctions. Thus the chance of accidental revealing wavelengths (Table) seems to be reliably avoided.

The second interesting result is that revealed wavelengths are located in the band from 3000 nm up to 1400 nm. There are no such wavelengths below 1400 nm.

There are adjacent wavelengths 2274.5 nm and 2274 nm in spectrum of EHC DNA. Furthermore directions of differences re placebo are identical for these wavelengths. Also there are closely located (0.5 nm) pairs of wavelengths in the spectrum of EHC FUN: 2662 nm and 2661 nm; 1662 nm and 1661 nm, but having various directions of differences re placebo. Has the direction of differences re placebo any system? It is not clear because differences of positiv and negative signs are mixed with approximately equal probability.

Although wavelengths' rows (Table) seem to be individual for each EHC type, there are identical wavelengths which are met in various EHC spectra: 2876.5 nm (VIR, FUN, MAN); 1931.5 nm (B, VIR); 1906 nm (DEG, MAN). Additionally there are some wavelengths closely located (in limits of about 5 nm) in various EHCs: 2805.5 nm – DEG and 2804 nm – FUN; 2221 nm – VIR and 2219.5 nm – TM; 2047.5 nm – VIR and 2052 nm – TM; 1456 nm – DNA, 1453 nm – DEG and 1461.5 nm – MAN.

DISCUSSION:
Are wavelengths' rows specific for each EC name? We have no enough data to verify it. Additional investigations are necessary to look for reproducibility of all these wavelengths for every EC names.

It is interesting that there are wavelengths laying close to typical water molecular vibrational resonances [1]: 3050 nm (v3 - asymmetric stretch), 2870 nm (v1 - symmetric stretch), 1900 nm (av1 + v2 +bv3, a+b=1 – combined obertone of strectch v1,v3 and bend v2 modes), 1470 nm (av1 + bv3, a+b=2 – combined obertone of strectch v1,v3 modes). It is even more interesting, that a part of revealed wavelengths having statistically significant distinctions re placebo demonstrated an order in their position being similar to spectral series [2].

Both statistically significant distinctions and a sign of an order in the wavelengths position may be treated in favor of reality of electronic homeopathic copying phenomenon, and consequently confirmation of physical basis of homeopathic nosodes usage in AK.

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Table. Wavelengthes (nm) with reliable spectral differences of EHCs re all 3 placebo groups

DNA	DEG	B	VIR	FUN	TM	MAN
2697.5	2805.5	2635.5	2843	2963.5	2974	2786.5
2446.5	2764	2558	2786.5	2822.5	2898.5	2402
2359	2647	2463	2772	2804	2520.5	2342.5
2274.5	2550	2396.5	2675	2786.5	2387	2238.5
2274	2334.5	1931.5	2520.5	2732.5	2219.5	1987
1697.5	1906	1855.5	2312.5	2662	2139	1984.5
1456	1898.5	1635.5	2221	2661	2052	1906
1647		2047.5	2597		1461.5	
1453		1931.5	2539			
		1675	2513			
			2277.5			
			2205.5			
			2135			
			1982			
			1662			
			1661			
			1404.5			

Best Practice Guidelines
For Diagnosing Muscle Imbalance –

Goodheart and Janda:
Applied Kinesiology and Physiotherapy

Review

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Abstract: Professor Vladimir Janda was a key figure in the 20th Century rehabilitation and manual therapy movement. An accomplished physiotherapist and neurologist, he founded the rehabilitation department at Charles University Hospital in Prague, Czechoslovakia. He was one of the seminal members of the Prague school of manual medicine and rehabilitation that expanded its influence throughout Central and Eastern Europe.

A review of Janda's published works demonstrates the breadth of his clinical interest and influence. His published papers varied greatly in their focus: from pediatrics to geriatrics, in addition to the effects of pediatric conditions upon the adult, from neurodiagnostic testing to the latest on rehabilitation and manual medicine approaches, from postural to neurologic disorders, and from ankle conditions to obscure facial pain. His 1964 thesis paper was on the association between sacroiliac pain and gluteus maximus weakness. **(Janda, 1964)**

In addition to publishing several texts in Czech, Janda subsequently published his books in German and English. Janda's approach has been discussed in many text books, often in chapters that he authored. Many years ago, Janda published a muscle testing book in English but it is now out of print. **(Janda, 1983)** There are several collections of his articles in English but they are often difficult to draw from in clinical application.

Many leaders in the manual therapy world -- like Drs. Chaitow and Liebenson -- have depended upon the work of Vladimir Janda for their concepts of muscular imbalances and the use of the MMT. These leaders interact and write in one another's books spreading the Janda-model far and wide.

This is unfortunate because of 5 PROBLEMS in Dr. Janda's view of muscle inhibitions…and fortunate as well because it has increased the worldwide understanding of the significance of muscle imbalances in human health.

***<u>It may be</u>* that an entire generation of manual therapists has abandoned the diagnostic gold-mine of the manual muscle test in part because of Janda's approach to the assessment of "muscular imbalance".**

This presentation will explore this contention.

Professor Vladimir Janda

5 Questionable Theses by Vladimir Janda About Muscular Imbalance

(with a few clarifications from George J. Goodheart, Jr.)

1. In the Janda approach to muscular imbalance disorders, muscular hypertonicity and spasm are considered the etiological factors of joint and soft-tissue dysfunction and are always treated first.

2. Janda stated frequently that postural muscles tend to be short, tight, and hypertonic in dysfunction.

3. Exercise (physio-therapeutic sensorimotor training) is the treatment of choice for muscle inhibition.

4. In the Janda assessment of postural disorders, "visual and palpatory diagnosis is the most reliable form of assessment for muscular imbalance." **(Liebenson, 2007)**

5. According to Janda **(Janda et al., 2007):**

"**Evaluation of muscle imbalance in a patient with an acute pain syndrome is unreliable** and must be undertaken with precaution. A precise evaluation of tight muscles and movement patterns can be performed ***only if the patient is pain-free or almost pain-free.***"

Reply to Janda's Theses

1 & 2:

Muscle inhibition (not hypertonicity) is the primary characteristic of painful muscles

The manipulative treatment of muscle imbalance physiology was first described by George Goodheart, **(1964-1998)** and was also considered a fundamental characteristic of postural and spinal imbalances by Vladimir Janda. **(1983, 1964)** The study of Dr. Goodheart's and Janda's development of the concepts of muscle imbalance (and their diagnostic and therapeutic approaches) provides fascinating comparisons. Muscle imbalance as conceived by Janda was mainly embraced by the physiotherapy community, though in recent years it has lost some of its popularity to the concept of core function and motor control. **(Lederman, 2010; Chaitow et al., 2008)**

Because the Janda approach avoids the manual muscle test for the evaluation of patients with muscular imbalances who are in pain, it is usually supposed in this world-view that the tight and tense muscles (the most easily palpable signs of muscle imbalance phenomena and the antagonists to the inhibited muscles) are responsible for muscle weakness.

"Stretch before strengthening" is another fundamental law in the Janda-Rehabilitation program. "If a movement pattern is faulty, the general rule of thumb is to initiate rehabilitation by treating tight muscles related to the faulty pattern." **(See Janda's movement pattern assessments below)** "Once tight muscles are addressed then facilitation and training of the 'weak link' can proceed. The reason for this is if muscle tightness is present, then strength training will typically reinforce 'trick' movements, thus perpetuating the muscle incoordination." **(Janda, 2007)**

In the Janda worldview Sherrington's law of reciprocal innervation operates in one direction **as a law of nature**, i.e. it is the hypertonic muscle that creates the phenomenon of inhibited muscles, not the other way around. This is not the correct interpretation of Sherrington's law of reciprocal innervation.

Sherrington's Law of reciprocal innervation states that **muscle inhibition** usually generates hypertonicity/tightness in antagonist muscles, ***and that the relationship between weak and tight muscles is reciprocal, with inhibition producing the same influence on their antagonist muscles as tightness.*** Sherrington advises that "Knowledge of reflex inhibition equally with that of reflex excitation is essential for the study of nervous co-ordination." **(Sherrington, 1913)** Abnormal muscle inhibition is as neurologically

important as over-facilitation in patients with pain and dysfunction…in fact, as will be seen later, **muscle inhibition is the primary long-term consequence of pain**.

Lund **(Lund et al., 1991)** and others have confirmed Sherrington's early insights showing that inhibition is frequently found in muscles resulting from injury, inflammation or pain and that the inhibition or weakness leads to reciprocal facilitation of its antagonist(s) and aberrant behavior of its synergist(s). **(Cuthbert, 2009a-d)** It is also true that hypertonicity in a muscle also leads to reciprocal inhibition of its antagonist(s) and aberrant behavior of its synergist(s). **(Janda, 1983)** This is the *reciprocity* of Sherrington's Law, with due respect paid to both models of diagnosis and treatment for muscular imbalance (Goodheart's and/or Janda's).

Goodheart's model is the one used by members of the professions who employ the MMT for diagnosis of neuromusculoskeletal dysfunction. **(Leaf, 2010; Kendall et al., 2005; Garten, 2004; Gerz, 2001; Walther, 2000; Maffetone, 1999; Goodheart, 1998; Walker, 1996)**

The AK MMT examination detects weak muscles, inhibited muscles, compensatory movement patterns, antalgic movement patterns, synergist substitution, timing and endurance impairments, and muscles recruited in an abnormal sequence. **(Schmitt & Cuthbert, 2008)** These dysfunctions help to identify which muscle or muscles are in trouble and what may be causing the problem. The weakness of muscles in the distribution of the motor nerve must by distinguished from the dysfunctional patterns of weakness induced by microavulsions and enthesopathy, trigger points, acupuncture meridian problems, cranial sacral problems and other strains related to functional muscle groups, regardless of innervation.

The broad scope of "causes" that have so far been identified using applied kinesiology methods have been described. **(ICAKUSA, 2012)**

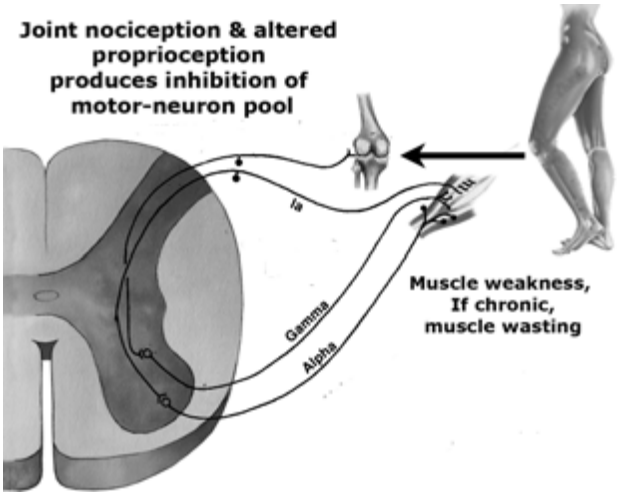
An inclusive assessment should be made to those components of dysfunction that best meet the patient's current needs. The AK method of evaluation for muscular inhibition helps identify the most appropriate and timely intervention.

There is no suggestion implied here that Janda's approach does not also seek causes (however, the principles of AK demand a primary attention to context and the processes involved in symptom manifestation, e.g. postural and structural imbalance, lowered vitality, organ dysfunction, nutritional imbalance, toxicity, meridian imbalances, etc.) as well as the more obvious etiological features of any given condition.

Examples of manual medical approaches that offer short-term gain, without consideration of the context out of which the symptoms have emerged, can be described for almost all professions and modalities. This is the case when they are applied in isolation, outside of a comprehensive contextual evaluation of the patient's broader symptoms and needs.

With the complexity of symptoms on display in the typical patient, including pain and dysfunctional tissues, joints, etc., where would it be most appropriate to initiate treatment? The MMT (with the addition of therapy localization and challenge) identifies the dysfunctional tissue and allows for the identification of the precise articular, soft-tissue, biochemical, or psycho-emotional correction that will change that finding.

This suggests that much that is currently done in chiropractic, osteopathic, manual medicine, physical therapy and massage therapy settings may fail to meet the basic AK requirements in dealing with the whole person and the causes of their problems.



Inhibited muscles found in the applied kinesiology clinical setting are capable of spontaneous strengthening when the inhibitory reflex is identified and remedied (most commonly through joint or soft tissue manipulation). (ICAKUSA, 2012)

Because in Janda's model muscle hypertonicity/tightness/spasm is the primary cause of inhibition in its antagonists, spasm is treated first.

However…modern pain research has demonstrated that one of the most prominent features of all chronic pain is the presence of localized areas of soft tissue dysfunction which promote pain, muscle imbalance, distress and muscle weakness in local and distant structures. **(Melzack and Wall, 1988)** These are loci which are known as myofascial trigger points, (MTrP) the focus of enormous research effort and clinical treatment.

According to Travell and Simons, ***an active trigger point will inhibit the function of the muscle in***

***which it is housed as well as those which lie in its target zone of referral*. (Simons et al., 1999)**
"*Although weakness is generally characteristic of a muscle with active myofascial trigger points*, **the magnitude is variable from muscle to muscle, and from subject to subject**. EMG studies indicate that in muscles with active trigger points the muscle starts out fatigued, it fatigues more rapidly, and it becomes exhausted sooner than normal muscles." **(Mense & Simons, 2001)**

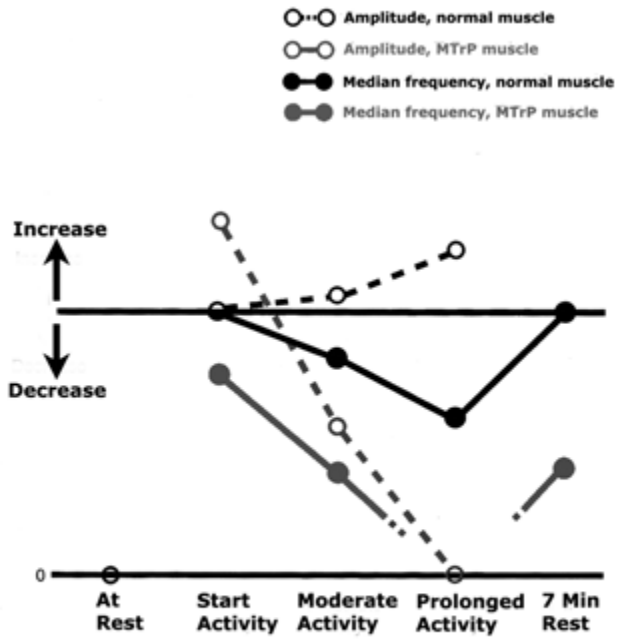


Figure 2.3. Comparison of surface electromyographic response to fatiguing exercise of normal muscle (*black lines*) and muscle with active myofascial trigger points (*red lines*). The averaged amplitude (*open circles*) and mean power frequency (*solid circles*) of the electromyographic record from the muscle with trigger points start out as if the muscle is already fatigued and show that the muscle reaches exhaustion more quickly (and is slower to recover) than normal muscle. These changes are accompanied by accelerated fatigue and weakness of the muscle with trigger points.

(Reproduced with kind permission, Simons & Travell, 1999)

It must be repeated that MTrPs are considered a hallmark finding of muscle pain syndromes and within clinical practice are claimed to be a common source of musculoskeletal pain and dysfunction in people presenting for manual therapy. **(Blanco et al., 2006)** Because muscles with MTrPs are almost always inhibited with movement and/or exertion, the Janda hypothesis that hypertonic/tight muscles are the etiological cause of musculoskeletal dysfunction ignores the findings of Travell, Simons, Kendall, Goodheart and many other researchers.

In Janda's approach hypertonic muscles are treated with physiotherapeutic means such as massage, stretching, proprioceptive neuromuscular facilitation, electrotherapy and other methods that do not usually include chiropractic or medical manipulative therapy. **(Page et al., 2010; Chaitow & DeLany, 2008)** In Janda's classic text on MMT there is no mention of spinal or other joint manipulation options for any muscle inhibitions found…and no correlations are observed between manipulative corrections (nor cranial, meridian, nutritional, or psychological treatments) and specific muscle inhibitions. **(Janda, 1983)**

Briefly, the following data emerges from the current literature concerning the muscular inhibitions co-present in patients with chronic low back pain (CLBP):

- **Reduced force of contraction**: Force losses in trunk muscles occur in acute and CLBP patients **(Hides et al 1994; Ng et al 1998; Shirado 1995a)**
- **Reduced range of motion FREQUENTLY DUE TO muscle inhibition:** Loss of flexion-relaxation response in the spinal muscles during flexion in patients with CLBP. Extensor activation prevents full forward bending **(Shirado 1995b).** Individuals with high pain-related fear had smaller excursions of the lumbar spine for reaches to all targets at 3 and 6 weeks, but not at 12 weeks following pain onset **(Thomas et al., 2008).** Smaller stride length **(Lamoth et al., 2008).**
- **Reduced velocity of muscle contraction**: Reduced velocity of trunk movement during induced back pain. **(Zedka et al., 1999**) Individuals with high pain-related fear had smaller peak velocities and accelerations of the lumbar spine and hip joints, even after resolution of back pain. **(Thomas et al., 2008)** Walking velocity significantly lower in LBP patients. **(Lamoth et al., 2008)**
- **Decreased endurance of muscles**: Increased fatigability of trunk muscles in patient with CLBP. **(Suter & Lindsay, 2001; Shirado et al., 1995a, b; Roy, 1989)**
- **Alterations in timing of muscular contraction**: Impaired postural control of the lumbar spine is associated with delayed trunk/abdominal muscles response times in CLBP patients. **(Thomas et al., 2008; MacDonald et al., 2006; Radebold et al., 2001; Hodges et al., 1999)** Increase in trunk co-contraction in CLBP patients. **(Cholewicki et al., 2005)** Increase co-contraction in trunk during walking and additional cognitive demands. **(Lamoth et al., 2008)**
- **Impaired coordination control**

of muscles: Lumbar spine-hip joint coordination altered in back pain subjects. **(Shum et al., 2005)** Dis-coordination in pelvis-thorax coordination in LBP. **(Lamoth et al., 2006)**

- **Impaired balance and decreased postural stability**: Changes in postural control in CLBP. **(Popa et al., 2007)** Impaired postural control of the lumbar spine associated with delayed muscle response times in CLBP patients. **(Radebold et al., 2001)** Changes in postural control unrelated to pain in CLBP. **(della Volpe et al., 2006)** Post spinal surgery postural control changes both in pain and pain-free subjects. However, more evident in the symptomatic subjects. **(Bouche et al., 2006)** Hip strategy for balance control in quiet standing is affected in CLBP. **(Mok et al., 2004)** The elegant experiments of Zampagni et al. **(2009)** demonstrated the effect of the AK shock absorber test upon hip muscle control as well. Experimental muscle pain changes feed-forward postural responses of the trunk muscles. **(Hodges et al., 2003)**
- **Impaired reaction time**: Compared to healthy controls, persons with LBP exhibited a reduced ability to adapt trunk-pelvis coordination and spinal muscle activity to sudden changes in walking velocity. **(Lamoth et al., 2006)** Slower reaction time in LBP patients.

A similar list of contemporary research showing the muscle inhibitions accompanying most of the other physical disorders experienced by patients who visit physicians around the world is available. **(ICAKUSA, 2012; Cuthbert, 2009a-d; Lund et al., 1991)**

Why then does the Janda approach always seek out the hypertonic/overactive muscle, and consider it the primary muscular consequence of neuromuscular dysfunction? Why is there a fundamental error in the Prague school's approach to the diagnosis and treatment of muscular imbalance?

BECAUSE it is the muscular imbalance phenomenon most easily palpated and visualized, the *modus operandi* of this system of diagnosis!!

However as we know palpation itself can have poor reliability, and the entity palpated under the skin (particularly for the determination of the strength, weakness, or responsiveness of the muscle under the palpating hands) is not easily identified by any examiner's sense of touch! **(Mense & Simons, 2001; Troyanovich et al., 1999; Keating et al., 1990)**

Reply to Janda's Thesis

2:

The variability of a muscle's adaptation to dysfunction

It is the clinical experience of manual muscle testers that muscle imbalances relate primarily to the individual patient's adaptations to specific injuries and stresses, rather than to any properties of these muscles to be either hypotonic or hypertonic **as a law of nature**. AK "essentially sees muscle function as a transcript of the central integrative state of the anterior horn motoneurons, summing all excitatory and inhibitory inputs." **(Schmitt & Yanuck, 1998)** If a muscle becomes hypotonic or hypertonic, this occurs as a result of a life-time of adaptive neurological events in a patient's history, and not because a particular muscle is 'postural' or 'phasic'.

Generally, Janda's conception that postural muscles tend to be tight and phasic muscles tend to be weak is imprecise and frequently inaccurate simply by virtue of the multitude of studies that show postural muscles are weakened, slower to contract, show decreased endurance and reduced performance characteristics in painful physical disturbances. **(ICAKUSA, 2012)**

The fact that postural muscles frequently show inhibition on MMT assessment is more in line with the common impression that pain makes muscles difficult to use and less powerful. **(Mills, 1983)**

For instance there is considerable variability in the changes of muscle activity between individuals with neck and low back pain, as demonstrated by the large standard deviation of EMG data. **(Cuthbert, 2009b; Falla et al., 2004)** Edinger as well as Strong showed that individuals with leg length inequality who placed their feet in a normal position a few inches apart showed substantial individual variations in the standing EMG. **(Strong et al., 1967; Edinger et al., 1957)**

It has also been demonstrated that every task or movement we perform will never exactly repeat itself **(Bartlett et al., 2007) –** variability is neurologically built into our body's response to life! It is now suggested that such variability is an essential healthy aspect of biological systems and that during injury and disease processes this variability tends to be diminished. **(Stergiou et al., 2006)** Further, muscle recruitment will vary considerably from one task to another. **(McGill et al., 2003)**

For example the trunk muscles will display completely different activation patterns during standing,

walking, reaching to the sides or forward, bending or lifting or any other imaginable movement. **(Andersson et al., 1996)** For this reason, the MMT's usefulness while the patient is in differing postures – as taught in the ICAK – is a critical, real-world addition to the MMT, and an approach unexplored in Janda's writings on MMT.

Furthermore, even within the same task, changes in the underlying movement parameters and many other factors will influence the complex recruitment of muscles. Most importantly for patients who see physicians, the experience, anticipation, or fear of pain will influence the muscle recruitment patterns dramatically, **(McGill et al., 2003)** making the predictability of the Janda Postural Syndromes dependably shaky.

No single pattern of muscle recruitment dominates movement (otherwise, it would be impossible to move). This has important implications for diagnosis and treatment and reinforces the necessity of an integrative and dynamic approach. It suggests that patients should be evaluated in a variety of positions and that these should be similar to the positions that the patient uses in daily life. **(Seidler, 2004)**

Janda emphasizes that prime movers and synergists are tested with the MMT, not individual muscles, and emphasizes that the usefulness of the MMT is minor compared to the visual assessment of total body movements during activities of daily living. **(Janda, 1983) (See reply to Janda's Thesis 4 below)** However it should be pointed out that every muscle is a prime mover in some specific action. In the search for that action, one is led into the field of precise, individual MMT. Manual muscle tests are designed to replicate the primary vector of motion of a muscle while minimizing the contribution of secondary mover muscles.

During an individual MMT, the designated primary mover muscle should have the highest level of activity compared with the secondary mover or synergist muscles. When any one muscle in the body is inhibited in its strength or action, stability of the part is impaired or some exact movement is lost to some extent. When inhibition of a muscle results in the inability to hold the test position or perform the test movement ascribed to that muscle, the usefulness of the individual muscle test is substantiated. Each of the body's muscles moves the organism in a unique direction and is definitely a part of every patient's total movement pattern. Proprioceptive acuity also depends on the intactness of the sensing apparatus (mechanoreceptors and their peripheral to central pathways) and the intactness of central integration/processing of sensory information. Generally in musculoskeletal injury the damage is to the proprioceptive apparatus in the periphery. Later it may be accompanied by adaptive central re-organization. Proprioceptive changes in peripheral musculoskeletal injuries usually manifest as diminished acuity in position and movement sense, diminished strength, velocity and endurance of movement. **(Cuthbert, 2009a-d)** These changes together with nociception often result in unrefined motor control, wherein the "predictable postural syndromes" predicted by Janda are rarely found except in textbooks on "the Janda model".

In the Goodheart model, if muscle inhibition is caused by a manipulable articular or soft-tissue disorder then the inhibited muscle's response to the proper manipulative therapy will be immediate and the tight antagonist muscles will relax. This brings about postural balance on visual inspection and corrects the positive MMT findings, both of which are evidence of the muscle imbalance phenomena.

Reply to Janda's Thesis 3:

Is Exercise the Best Treatment for Patients with Pain and Muscle Inhibition?

In Janda's model of muscle imbalance, the inhibited (weak) muscles are treated with exercise, rocker-boards, wobble-boards, balance-shoes, and mini-trampolines among others. **(Page et al., 2010; Morris, 2006)** The principles of this physical therapy approach to muscular imbalances were based on the work of Bobath and Bobath **(1964)** who developed physiotherapy programs for children with cerebral palsy.

It should be of major concern that patient compliance, adherence, and participation is poor for exercise programs even when the individuals felt the effort was producing benefits. **(Chaitow, 2008; Liebenson, 2007)** Most rehabilitation, stretching, and exercise programs report a reduction in patient participation (even when the individuals felt that the effort was producing benefits). **(Lewthwaite 1990)**

Wigers et al. **(1996)** found that 73% of patients failed to continue an exercise program when followed up, although 83% felt they would have been better if they had done so. Correcting muscle inhibitions with remedial exercise is also time-consuming, and patients are remarkable in how incorrectly they can perform their exercises! **(Liebenson, 2007)**

Despite this experts such as Liebenson **(2007)** and Lederman **(1997)** highlight the need to move as rapidly as possible from passive (operator controlled) to

active (patient controlled) methods. The rate at which this happens depends in their model largely on the degree of progress, pain reduction and functional improvement.

However the question must be asked: if home exercises are needed for muscles that are still inhibited after in-office assessment and treatment, how effective are the hands-on manipulative treatment modalities being used, if they are being used at all…?

Although exercise can increase muscle strength, **(Bearne et al., 2002)** few studies have investigated whether this results in an improvement of functional performance and decreases disability. Moreover, these research studies usually involve prolonged and labor-intensive rehabilitation regimes – **often patients are required to attend three exercise classes per week for twelve weeks** – making them expensive and clinically impracticable.

An important study by Korthals-de Bos, et al. in the *British Medical Journal* **(2003)** showed that patients who received care from general practitioners for neck pain were randomly allocated to receive 1) manual therapy (spinal mobilization), 2) physiotherapy (mainly exercise) or 3) general practitioner care (counseling, education and medication). Throughout this 52-week study, patients rated their perceived recovery, intensity of pain and functional disability. **Manual therapy proved to be the most effective treatment for neck pain.** The clinical outcome measures showed that manual therapy resulted in faster recovery than physiotherapy and general practitioner care. While achieving this superior outcome, the total costs of the manual therapy-treated patients were about one third of the costs of physiotherapy or general practitioner care.

As well as being effective, rehabilitation regimes must also be safe. It has been suggested that exercise of inflamed joints might cause joint damage by hypoxic reperfusion injury, **(Blake et al., 1989)** whereby contraction of muscles acting across inflamed joints raises the intra-articular pressure above the perfusion pressure, precluding the blood supply to the synovium, which becomes hypoxic. The implication is that exercise – even common physical activities – may be inappropriate, dangerous and contraindicated for patients with inflammatory joint conditions, i.e. patients who are in pain and most likely to visit clinicians for treatment.

Although applied kinesiologists employ exercise and rehabilitation programs in their treatment of patients, they focus their unique training and skills on providing structural, nutritional, and psychosocial corrections for the neurological inhibitions found. Furthermore joint dysfunctions that produce muscle inhibition in patients will not be effectively addressed with exercise, stretching, and other non-manipulative modalities. **(Dishman et al., 2008)**

Reply to Janda's Thesis 4:

Visual Diagnosis of muscular dysfunction – the 'skinvelope' problem

Goodheart, Walther, Kendall, Chaitow and DeLany, Liebenson, Janse, Sutherland, Magoun **(Goodheart, 1998-1964; Walther 2000; Janse, 1976; Kendall et al., 2005; Chaitow & DeLany, 2008; Liebenson, 2007; Sutherland, 1998; Magoun, 1976)** and many others have written extensively about the closed kinematic chain of the body. When the foot is in contact with the ground, the foot, leg, thigh, and pelvis make up a modified closed kinematic chain. Imbalance in any part of the chain will cause change in function of the remote portions of the chain; thus extended pronation puts torsion into the leg, thigh, and pelvis, which would not ordinarily be present. Because foot malfunctions lead to instability during gait, compensation patterns emerge that have body-wide implications.

Dananberg **(1997)** and Simons et al **(Simons et al., 1999)** report that a cascade of myofascial conditions are likely to emerge in the patient with disturbances in foot structure and function, including pain in the low back, thigh, knee, and foot. **The visual diagnosis** of a specific joint or muscle impairment in the foot and simultaneously its relationship to a specific joint or muscle impairment in the hip, shoulder, neck or jaw is fraught with difficulty. **(Lederman, 2010)**

The different elements within the chain of events that a patient performs in front of the examiner occur within a fraction of a second; far too rapidly to be accessed individually in the absence of laboratory tools. Therefore what is actually observed by the examiner who depends upon visual diagnosis of these muscle-joint interactions is the grand total of how rapidly and smoothly a person's global posture moves between two activities – it is almost impossible to make a diagnosis of a specific muscle or joint dysfunction on this basis.

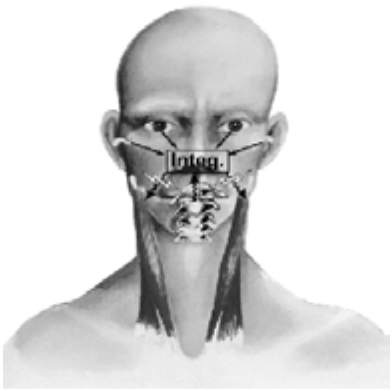
By way of comparison, the AK MMT permits a specific challenge to a muscle or joint in the foot to be immediately followed by another MMT to a distant joint or muscle, thereby making evident to both the physician and the patient the measurable and dynamic interactions going on between two distant structures. The MMT as used in AK makes the diagnosis of these

interactions between the joints and muscles of the foot and remote structures and muscles throughout the body far easier. Dananberg also reminds us that the visual diagnosis of muscular imbalances during gait is difficult. **(Dananberg, 1997)** What is actually observed by the examiner is the big picture of how rapidly and smoothly a person can change between two activities – inaccurate, but for many clinicians in the Janda-universe, apparently good enough. The addition of the AK MMT approach for dysfunction in the strength and movement of the great toe, and testing the muscles that move the great toe during the stance position of gait, as well the influence of functional *hallux limitus* upon remote muscle function throughout the body, is a great help in diagnosing this subtle but critical disorder. **(Cuthbert, Walther, et al., 2012: In Development)**

In reviewing Janda's writings, SCC cannot find instances where manipulation of the foot is recommended to correct its dysfunctions. In fact, throughout his classic textbook on the MMT, Janda does not mention relationships between the muscles found inhibited on MMT and the manipulative approaches that might correct this finding. In his discussion of rehabilitation approaches for patients with foot and leg disorders, sensory-motor stimulation approaches are the primary treatments offered.

The term sensory-motor system is very important however as Janda (like Goodheart) understood that to split the function of the musculo-skeletal system from the central nervous system is wrong. Both parts function as one inseparable functional unit and cannot be sundered. However, the manipulative approach (particularly high-velocity, low-amplitude manipulation) in order to strengthen muscular inhibitions associated with these disorders – is underplayed and essentially unspoken in Janda's rehabilitative system of therapeutics.

In the examination of muscular dysfunctions, Janda also points to the existence of oculo-pelvic and pelvi-ocular reflexes. This means that a change in pelvic orientation alters the position of the eyes and visa versa, and to the fact that eye position modifies muscle tone – visual synkinesis – particularly involving the suboccipital muscles (look upward and the extensors strengthen, look downward and flexors prepare for activity, etc.). The implication of modified eye position due to altered pelvic position therefore becomes yet another factor to be considered when unraveling chain reactions of interacting adaptive elements. "These examples" Janda says, "serve to emphasize that one should not limit consideration to local clinical symptomatology but that we should always maintain a general view". This approach is identical to the one developed in applied kinesiology, with the essential addition of a reliable tool for analysis of the effect of "oculo-pelvic" and "pelvi-ocular" reflexes upon skeletal muscle function. (Already in 1979, Goodheart developed methods for testing these interactions – called "oculo-basic" in AK – nearly a decade before Janda described of these interactions.) **(Goodheart, 1979)** As mentioned, Goodheart found a diagnostic solution to the visual reflex problems Janda elegantly surmised. **(Cuthbert, 2006)**



AK methods can evaluate whether the sensory inputs coming from the upper cervical spine, the muscles of the neck and the rest of the body are congruent with those coming from the eyes and inner ears.

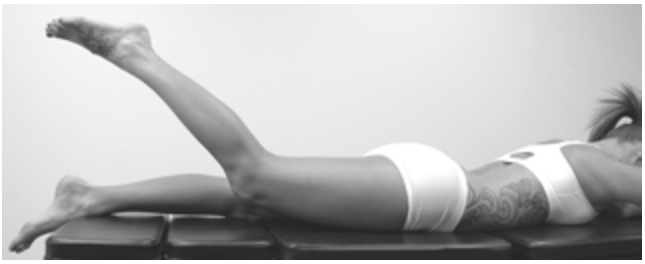
Reply To Janda's Thesis 4 & 5:

Visual Assessments of Lower Body Dysfunctions

Janda's 3 Lower Body Tests

Prone Hip Extension (PHE) Test

Normal PHE test.



Abnormal PHE test.

In this picture there is lumbar extension, anterior pelvic tilt, and knee flexion.

The Prone Hip Extension (PHE) test was developed by Janda as a means of assessing motor control of specific low back and thigh muscles. During the PHE test the physician palpates the ipsilateral gluteus maximus, ipsilateral hamstring, ipsilateral erector spinae, and contralateral erector spinae muscles in order to determine the order of activation. Janda theorized that the muscle activation sequence during the PHE simulates the muscle recruitment pattern of hip extension during gait. Janda did not develop a method for using the MMT to assess "gait dynamics".

Janda proposes that the "normal" order of muscle activation is as follows:

- Gluteus maximus activates first,
- Hamstrings second,
- Contralateral erector spinae third,
- Ipsilateral erector spinae last.

"The most common sign of a faulty movement pattern is over-activation of the hamstrings and erector spinae and delayed or absent contraction of the gluteus maximus." The PHE test demonstrates a relative imbalance between the hip extensors themselves (gluteus maximus, the hamstring and the erector spinae muscles) as well as between the hip extensors and the hip flexors (iliopsoas, quadriceps).

However…which muscle is at fault when the movement pattern above is impaired? (For Janda, visualization and palpation determines this.) What is the source of the disturbance to the muscle (joint subluxation, trigger point, ligament, muscle spindle cell, meridian imbalance, dehydration, emotional overlay, etc.…?) In the rehabilitation model developed by Janda, treatment to a palpable source of tension is given and then visual reassessment performed. (Is it any wonder that several weeks of treatment, including exercises, are necessary before a clear and definitive outcome for the patient can be seen…?)

Unfortunately Janda's order of muscle activation has been shown to be inaccurate.

Jarosz **(2010)** reviewed 11 studies which evaluated the muscle sequence activation order of the PHE test and found that the proposed "normal" order of muscle activation (i.e. gluteus maximus, hamstrings, contralateral and finally ipsilateral erector spinae) during the PHE test is incorrect. Two studies (n=51 and n=30 respectively) showed that Janda's proposed muscle activation pattern was used in less than 0.5% of PHE test repetitions. **(Bruno & Bagust, 2007, 2006)** Furthermore the timing differences between the onsets of muscle activation are quite small and are described in some studies as "almost simultaneous". **(Sakamoto et al., 2009; Nygren Pierce & Lee, 1990)**

In clinical practice it would be improbable to accurately determine the muscle activation order via palpation and/or visualization alone. Only with the use of EMG could these minor disparities be detected. Jarosz **(2010)** notes that "the solitary consistent finding within the literature was that the gluteus maximus activated last during PHE"…a precise reversal of Janda's thesis.

Additionally, Hestboek & LeBoeufe-Yde **(2000)** performed a systematic review of peer-reviewed chiropractic and manual medicine literature relating to the accuracy of tests performed for the lumbopelvic spine. In their conclusion they state: "Only studies focusing on palpation for pain had consistently acceptable reliability values. Studies testing for motion palpation for the lumbar spine and sacroiliac joints, for leg-length inequality, and most of the sacro-occipital technique tests had mixed findings, **whereas visual inspection…had consistently unacceptable agreement**."

The AK method of therapy localization and challenge offers a way of making the PHE test clearer and more useful.

As Professor Janda proposed in his college thesis, (1964) in sacroiliac strains, the ipsilateral gluteus maximus will test weak. With TL to the S-I joint, the gluteus maximus strengthens – or in this scenario, the PHE test is improved.

Hip Abduction Movement Pattern Test

Normal Hip Abduction Test

The patient is instructed to lift the leg toward the ceiling. "The normal pattern of hip abduction is abduction to about 20 degrees without any hip flexion or internal or external rotation and with a stable trunk and pelvis – in other words, abduction without any hip elevation or trunk rotation."

Abnormal Hip Abduction Test with hip-hike

In an abnormal hip abduction test, hip abduction is initiated by contraction of the quadratus lumborum before 20 degrees of hip abduction, resulting in a lateral pelvic tilt or hip hike. In this case, the quadratus lumborum muscle changes from a pelvic stabilizer to a prime mover.

Abnormal Hip Abduction Test with hip flexion from TFL activation

In an abnormal test the tensor fascia lata muscle is used for abduction and this movement is combined with hip flexion due to the TFL's dual action as a hip flexor and abductor. The side-lying hip abduction test demonstrates relative imbalance between the hip abductors themselves (gluteus medius, quadratus lumborum and tensor fascia lata) as well as between the hip abductors and adductors.

Liebenson **(2007)** reports that altered hip abduction commonly involves a weak gluteus medius, together with overactive and probably shortened:

- Antagonists: adductors
- Stabilizers: quadratus lumborum
- Synergists: tensor fascia lata
- Neutralizers: piriformis

However, which muscle is at fault? (In the Janda-Rehabilitation approach, palpation and visualization determines this.) And if weakness of the gluteus medius underlies the abnormal hip abduction test as Liebenson suggests…why isn't the MMT used for discovery of this dysfunction? What is the source of the disturbance to the muscle (joint, trigger point, ligament, spindle cell dysfunction, dehydration, emotional overlay…?) Further, are these etiological factors connected – in the clinician or the patient's mind – to the positive test indicating the disorder causing the patient their pain?

The AK method of therapy localization and challenge offers greater clarity to the Janda tests.

In the Hip Abduction Test, TL to the origin of the gluteus medius muscle may immediately correct the abnormal test if this muscle is at fault. (Hip hike eliminated and the test performed smoothly and comfortably by the patient)

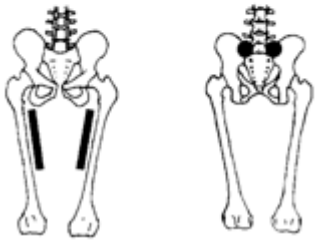
To sum up, in the AK assessment of the sacroiliac joint, the specific functional strengths of the gluteus maximus, gluteus medius, piriformis, quadriceps, abdominals, hamstrings (biceps femoris, vastus lateralis and medius) and latissmus dorsi—critical to the adequate form closure of the sacroiliac joint **(Knutson, 2004)** --are tested. Additionally, the effect of stabilization (the AK sensorimotor challenge) of proximal or distal structures like the sacroiliac joints, lumbar vertebral joints, cervical spine (with TL and challenge) upon each of these muscle's functions is an important addition to the AK system of analysis. The MMT of each of the muscles involved (and their association to one or more structures located locally or distally) is believed to untangle these complex adaptations to sacroiliac joint dysfunctions. In addition, the AK methods of TL and challenge offer further insight into the PHE test.

Trunk Curl-Up Movement Pattern Test

The trunk curl-up test estimates the interplay between the iliopsoas and the abdominal muscles. With the patient supine the examiner analyzes the patient's preferred way of doing a sit-up. If the sit-up is performed with adequate abdominal contraction, a flexion or kyphosis of the upper trunk is seen. However if the movement is performed primarily with the hip flexors, curling of the upper trunk is minimal and an anterior tilt of the pelvis is observed… VISUALLY, always VISUAL diagnosis for assessment of normal or abnormal muscle function…muscle function that takes place beneath the "skinvelope".

The curl-up test can also be performed with the examiner placing his hands under the patient's heels to detect early loss of pressure. If a loss of heel pressure is detected before the end of the sit-up, the test is positive, indicating the dominance of the hip flexors over the abdominal muscles.

This test does not evaluate the functioning divisions of the abdominal or iliopsoas muscles or the etiology of dysfunctions found during the test nor the very large assortment of factors that may impair this muscle's function.



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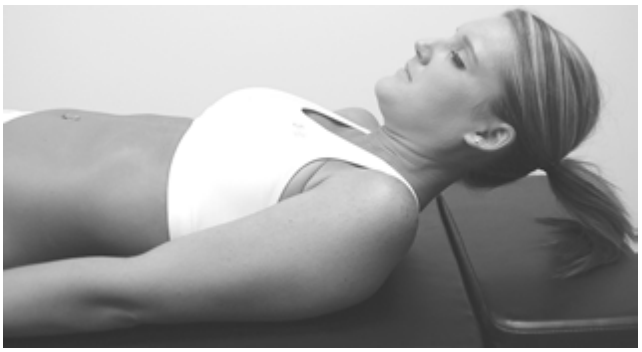
Visual Assessments of Upper Body Dysfunctions

Janda's 3 Upper Body Tests

1) Cervical Flexion Movement Pattern Test



Normal

A proper movement pattern for deep neck flexor muscle function entails cervicocranial flexion throughout the test. The cervical flexion test purportedly estimates the interplay between the deep cervical flexors and its synergists, namely the SCM and anterior scalenes.

Abnormal

The test is positive when the chin or jaw juts forward at the initiation of movement, "suggesting a dominance of the SCM and scalenes over the weaker deep cervical flexors."

Because the cervical muscles are so complex in their functioning, **Janda admits "If the pattern is unclear, the clinician places 1 or 2 fingers against the patient's forehead to apply a slight resistance to movement."** **<u>Essentially – "if you can't see it, manual muscle test it!"</u>**

Once again the AK method of therapy localization and challenge makes the Janda test of abnormal movement function far clearer.

Cervical Flexion Movement Pattern Test improved with TL to upper cervical spine

In the Cervical Flexion Test, TL to the upper cervical area may immediately correct the abnormal test if this area is at fault. (Chin or jaw jutting forward eliminated and the test performed smoothly and comfortably by the patient)

Deep neck flexors – specific MMT

2) Push-Up Movement Pattern Test

This test purportedly assesses the "quality of dynamic scapular stabilization." The key finding from this test is – **remember 1964!** – "weakness of the serratus anterior becomes evident when the patient displays winging of the scapula or excessive scapular adduction or is unable to complete the range of scapular motion in the direction of abduction."

"Dominance of the upper trapezius and levator scapulae is demonstrated by excessive shoulder elevation or shrug."

Scapular winging, the so-called Gothic shoulders, the levator notch, and excessive bulk of the pectoral muscles are the body-language signs indicating that the clinician should include the Push-Up Test to confirm the imbalances associated with the Upper Crossed Syndrome described by Janda.

Gothic Shoulders

The specific functional strength of the infraspinatus, subscapularis, middle, anterior and posterior deltoid, pectoralis major and minor (sternal and clavicular divisions), latissimus dorsi, upper, middle, and lower trapezius, levator scapulae, rhomboid muscles and more **are neglected in this examination system**.

Additionally, the effect of stabilization of proximal or distal structures like the acromio-clavicular joint or cervical spine (with therapy localization and challenge) upon these muscles' function is an utter unknown in this system of analysis. These tools along with the functional evaluation of muscles provide valuable additional tools for the clinician in the evaluation of the total shoulder joint complex.

As noted throughout the MMT literature, a muscle must function from a stable base to test strong. Stability of the clavicle and/or scapula is essential for normal shoulder muscle function. If during the examination of the shoulder there is weakness during shoulder MMT, re-evaluate the test by stabilizing the clavicle or scapula. When lack of clavicular or scapular stability is causing a shoulder muscle to test weak, determining the reason for the instability goes a long way toward correcting shoulder dysfunction and the muscular imbalances that create it.

3) Shoulder Abduction Movement Pattern Test

The shoulder abduction movement pattern test is normal when the shoulder itself begins to rise only after 60 degrees of shoulder abduction while there is an associated scapular elevation.

Shoulder abduction movement test is abnormal (the scapulo-humeral ratio is disturbed) when there is any noticeable elevation of the shoulder girdle before 60 degrees, and indicative of incoordination and impairment of the force couples among the muscles involved in shoulder abduction. Note in the shoulder abduction test above the right cervical rotation, which indicates dominance of the levator scapulae.

Once again the AK method of therapy localization and challenge makes the Janda test of abnormal movement function in the shoulder clearer.

Shoulder Abduction Movement Pattern Test immediately improved with TL to the acromio-clavicular joint (subsequent challenge showed that this joint dysfunction was inhibiting the subscapularis, middle deltoid, and serratus anterior muscles).

In the Shoulder Abduction Test, TL to the acromio-clavicular area may immediately correct the abnormal test if this area is at fault. (Shoulder girdle movement no longer occurs before 60 degrees of abduction and the test is now performed smoothly and comfortably by the patient)

It should be obvious that the MMT of each of these specific muscles of the shoulder would help to untangle the complex adaptations occurring in a patient with shoulder problems. Visual assessments would be enlightened by this method of muscle function evaluation.

Janda's Crossed Syndromes

Six functional tests suggested by Janda are said by many to offer a rapid screening of major movement patterns of key muscles in the hip, shoulders and neck. **(Chaitow & DeLany, 2008; Liebenson, 2007; Morris, 2006)**

Janda's conception that postural muscles tend to be tight and phasic muscles tend to be weak is far too restrictive as will be seen by the many studies that show postural muscles so frequently inhibited in physical disturbances, especially low back and neck pain. **(Cuthbert, 2009a-d; Jull et al., 2008)** Muscle fiber types (tonic and phasic, slow twitch and fast twitch) are not fixed and evidence shows the potential for adaptability of muscles based on use and need, so that muscle fibers can be transformed from slow twitch to fast twitch and vice versa. **(Lin, 1994)**

An international panel of experts discussed the role of muscle imbalance and classification of muscle function in the ***Journal of Bodywork and Movement Therapies*, now the official journal of the ICAK. (Bullock-Saxton et al, 2000)** Interestingly, even among these experts, there was still confusion regarding muscle classification particularly as delineated by Janda. It may be that this confusion, which presumably would be greater in "non-experts", could be part of the reason that "muscle imbalance" has not become a mainstay of clinical assessment for many manual therapists.

The traditional Janda approach to muscle imbalance may have lost some of its appeal, because to measure such length-tension relationships and joint changes about both the pelvic and pectoral girdles (without the MMT) and to assess their impact on spinal mechanics through inclinometry takes longer than the average consultation usually allows. So in traditional physiotherapeutic clinical practice, PTs are left with visually assessing muscular imbalance and then offering physical treatments and exercise recommendations based on the surmises of the visual and palpatory evidence, all of which has some serious short comings.

1. This approach depends on subjective assessment – which is open to bias (visual and palpatory unreliability).

2. This subjective assessment approach provides little incentive for the patient to perform prescribed corrective exercises – especially in the absence of pain.

Hence it is strongly urged **(Chaitow, 2008)** that to evaluate muscle imbalance using the Janda approach, clinical measurement tools including inclinometers, tape-measures, rib- calipers, forward-head calipers, plumb-line and digital-camera and/or camcorders must be used. This is rarely the clinical setting the vast numbers of clinicians treating musculoskeletal pains around the world can offer to the hundreds of thousands of patients who seek care for these conditions.

Static postural pictures are only "snapshots" of postural, anti-gravity muscles even when assessed carefully with a plumb-line. These syndromes of postural imbalance give the clinician an image *but do not explain why the image exists or how well the individual is adapting to the changes involved.* When faced with structures which are apparently "weak" or "tight", it is of clinical importance to consider "why is this happening?" and "where are these disturbances coming from?"

A full functional AK structural examination may include (depending on the condition) a wide range of MMTs, motion assessments and sensorimotor challenges to the joints that are related to the positive MMT; palpation to assess for freedom/restriction (ease/bind); the effect of mental-emotional thoughts or images upon the MMTs; the effect of related nutritional factors, meridian tonification or sedation point stimulation upon the MMT and more. Each of these influences produces measurable effects upon the reliable MMT that **can be objectively measured immediately**. The increased speed of detecting the broad array of interactions going on within the body (and the influence of biomechanical, biochemical, and psychological disturbances upon local or global muscle function) makes the AK use of the MMT a genuine asset in the clinical examination of muscle imbalance phenomena.

These remarks are designed to help make sense of the postural, orthopedic, and palpation tests Janda has offered and to offer confirmation of best treatment choices. Once a dysfunction has been identified by virtue of a visual or palpatory test, it is necessary to define precisely what type of dysfunction exists. The effect of this dysfunction upon attaching or remote muscle function is suggested by the therapy localization and challenge procedures in AK. The associated muscle weakness, easily determined by MMT, is then evaluated with a challenge procedure. Appropriate angular and pressure stimulation of the articulation produces immediate strengthening of inhibited muscles related to the dysfunction.

Goodheart's Modular Syndromes: more individual and more reflective of the human variability of adaptation to dysfunction

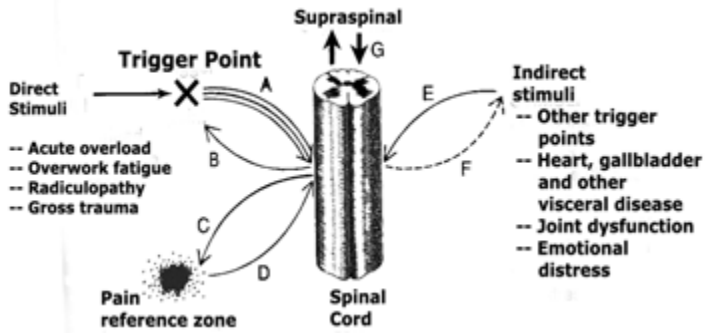
In AK modular testing, there can be lower and upper body disturbances, rotatory disturbances, and a multiplicity of postural syndromes resulting from injury to one or more of the 5-factors of the IVF. The modular disorders that Goodheart describes are not "rules of biomechanics" or "absolute muscular realities". **(Goodheart, 1980)** (Goodheart's PRYT modular system of diagnosis anticipated Janda's description of the various Crossed Syndrome patterns by several years.)

On the other hand, a risk with Janda's model of muscle dysfunction (based on visualization and palpation) is that practitioners may expect to find set changes to occur and fail to adequately assess the patient's genuine state of adaptation and dysfunction. Naming the postural category and then treating the category is equivalent to giving all patients a general adjustment, or the same all-purpose multi-vitamin pill. This will usually result in poor treatment outcomes. Every muscle that is part of an articular and postural dysfunction or part of a kinematic chain of muscular dysfunction **(Myers, 2010)** must be specifically assessed for strength, coordination, ease of use, length and tone no matter whether you follow the Goodheart or the Janda model clinically.

Although these distinctions between postural and phasic muscles (including upper and lower crossed syndromes) can usefully assist the clinician, they are not cast in stone. Diagnosis of muscular imbalances underlying articular dysfunctions must be refined to reveal the subtleties of the muscle system's reactions to injury, pain, altered use and pathology in the particular patient under study.

Goodheart points out that muscular adaptation can involve a wide variety of influences (structural, chemical, and mental). **(Goodheart, 1998-1964)** The clinician therefore must keep in mind that what is presented in a patient with muscle imbalances may represent only the acute problems that brought the patient in for care that have evolved out of a multiplicity of chronic adaptive patterns. Discovering the core of the problem and diagnosing the treatable obstacles to normal function involves patience, adaptability and skill…and if you are using hands-on manipulative

treatment methods, **the correct model** of muscle imbalance expedites and improves the care given.



Simons & Travell (1999) demonstrate the multiplicity of influences that may produce myofascial trigger point activity, pain and inhibition.

(Reproduced with kind permission, Simons & Travell, 1999)

Experienced clinicians will agree that unpredictability and individuality are the rule where muscular compensations are concerned, especially when recent adaptations are added onto chronic adaptation patterns in the typical patient. In the case of the muscle imbalance phenomenon, this should lead clinicians to evaluate individual muscles in individual humans with the MMT. In agreement with literature cited in this presentation, muscle inhibitions will be found to be major generators of the disorders clinicians treating neuromusculoskeletal disorders face in their patients.

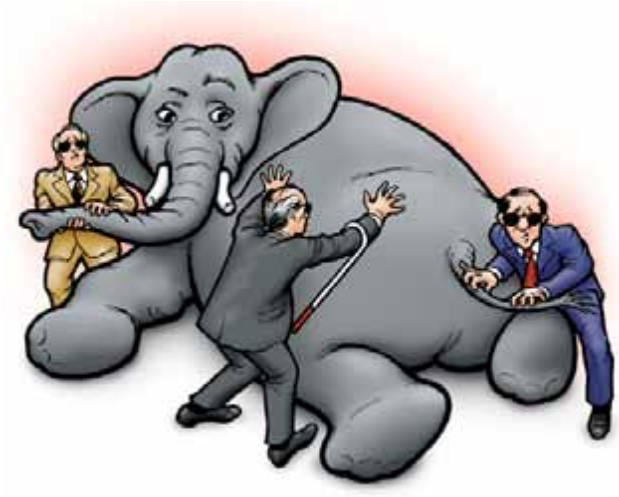
Applied kinesiology solves many of Dr. Janda's and rehabilitative medicine's diagnostic dilemmas and challenges

Finally, another reason for the decline in interest in the Janda approach to muscle imbalance in the physiotherapy and manual medicine communities is that, as with nearly all clinical entities, to find a "text book" case is less common than finding a partial case. This brings with it confusion.

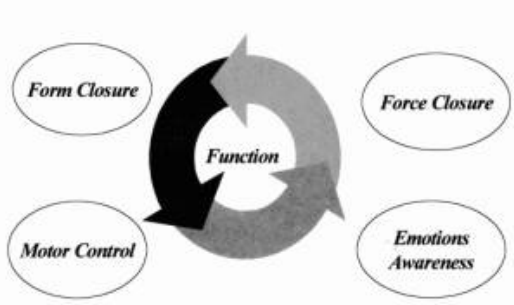
Commonly the approach to diagnosing a muscle imbalance (for practical purposes) is based primarily on subjective assessment, such as the visual observation of standing posture or the palpation of muscle sequences during basic movement pattern diagnosis as described above. While this approach may be time effective and is not useless, it does mean that prescription of treatment – in the physiotherapy world, corrective stretching, corrective mobilization, corrective exercises and life-style advice – may be non-specific. Additionally, aside from symptomatology, progress is difficult to gauge with such subjective tools of evaluation.

Interestingly, Goodheart's diagnostic concept of sensorimotor challenge and/or therapy localization has recently been restated by Vleeming and Lee **(Vleeming et al., 2007; Lee, 2004)** in their "form" and "force" closure model of sacroiliac joint function.

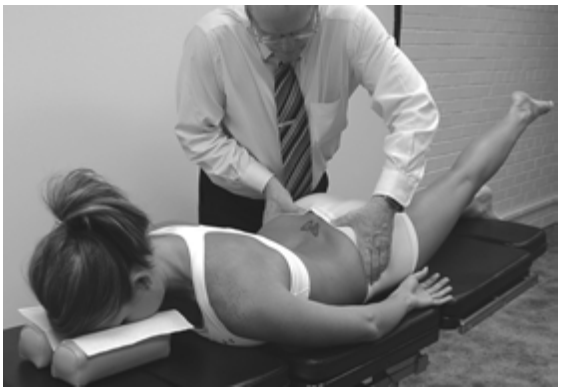
Their development of this diagnostic method was in part due to the difficulty of the visual and palpatory method of diagnosis of muscular imbalance Janda had offered the physiotherapy and manual medicine communities worldwide.



Vleeming and Lee have developed functional tests that help the clinician determine the best positions of form and force closure in a particular joint by using visual tests that identify improved ranges of motion while improved form and force closure are applied across the joint.



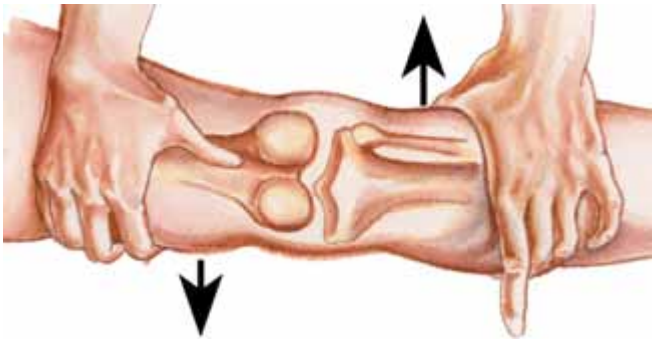
With "form closure" **(below)** of the sacroiliac joint augmented (the sacroiliac joint approximated), the prone straight leg raise is visually improved.



With "force closure" **(below)** across the sacroiliac joint augmented (the latissimus dorsi is recruited to increase tension in the thoracolumbar fascia), the prone straight leg raise is improved.

Instead of only approximating the joint as in the Vleeming and Lee diagnostic model (and then using a less reliable visual test for a change in movement), the AK sensorimotor challenge can determine the best angle of correction for the disturbed osteokinematics of the sacroiliac joint subluxation present (while using a more reliable test for a change in strength).

In most joint dysfunctions, there will be a combination of vectors that causes the maximum amount of indicator muscle strengthening. This is the optimal vector for correction as well, the diagnostic test leading to the treatment necessary for correction.



As Liebenson **(2007)** wisely states, to effectively manage pain patients, it is critical to provide a focus on returning function as opposed to getting rid of dysfunction. Therefore the means to objectively assess joint position, joint range of motion and length-tension relationships is critical, in order to manage patients effectively and provide ongoing motivation for a return toward function.

Therapy localization and challenge methods from AK immediately change altered movement dynamics, muscle firing sequences, range of motion, velocity, responsiveness of contraction, and strength. This makes these two methods from AK extremely valuable to the clinician using the Janda diagnostic model to discover why muscle imbalances are occurring. Whenever muscle imbalances are found, a multiplicity of causes and maintaining factors may be associated with the hypotonicity or hypertonicity associated with a dysfunctional pattern.

One reason the cause of a patient's musculoskeletal pain is so enigmatic is that an adequate examination to cover the most common causes requires skills characteristic of as many as 10 disciplines. The clinician may be required to examine for muscle imbalance in the kinesiological sense, neurologic function, myofascial trigger points, fibromyalgia, psychological overlay, endocrine and nutritional imbalance, articular dysfunction and more. **(Simons &**

Travell, 1999) Such a complete examination is indicated for the patient with chronic musculoskeletal pain who has seen many specialists without finding a satisfactory answer to the cause of his or her pain. This kind of examination for functional muscle imbalance is part of the applied kinesiologist's training.

An effective examination requires the development of adequate palpation skills and excellent knowledge of every muscle's origin and insertion and myofascial attachments, anatomy and physiology. The details of this examination also vary from muscle to muscle and are not yet routinely taught in many chiropractic and medical training programs. With the development and expansion of applied kinesiology, more and more chiropractors, physical therapists, physiatrists, osteopathic physicians, dentists and medical practitioners of other clinical specialties have subsequently (or soon will) learn these important skills.

Goodheart, Janda, Liebenson, Morris, Chaitow, Vleeming and Lee each agree that muscles are in fact "the most exposed part of the nervous system." Muscle imbalance therefore brings us back to the nervous system at the core of all human activity -- this is where D.D. Palmer and George J. Goodheart, Jr. started from in the first place.

In memory of David S. Walther, DC

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Polymodal Afferent Challenging (Part I of II)

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ABSTRACT:
A clinical approach for eliciting subclinical focal lesions, dyshomeostasis, and for pre- and post- treatment evaluation of functional neurologic integrity. Utilizing multiple sensory modalities, the neuraxis can be challenged according to receptor type and afferent pathway.

Key Indexing Terms: Polymodal Challenging, Dyshomeostasis, Functional Neurology, Therapy Localization
Introduction

INTRODUCTION:
Applied Kinesiology at its fundamental basis is an analysis system utilizing neurological feedback loops and is largely a treatment framework for neural receptor-mediated dysfunction. Expanding on existing clinical protocols, herein presented is a method for challenging afferent pathways by applying various sensory modalities. This method can serve as both a tool for baseline and outcome assessments of functional neurologic integrity. When extrapolated into the body as a whole, this approach to neurological challenging can provide a measure of the ability to maintain homeostasis under different conditions.

The following is a simplified review of the basic spinal cord pathways relevant to this testing methodology. Because gustatory and olfactory pathways are commonly used in Applied Kinesiology protocols, they will not be addressed in this paper. The perception of sound (via cranial nerve VII) and the visual perception of light (via cranial nerve II) will likewise not be addressed in this paper because the complexity of the discussion of those systems is outside the scope of this paper.

Anterolateral System (ALS)

Localization Pathways (to determine general location of stimulus):

1. Pain: Lateral Spinothalamic Tract
2. Temperature: Lateral Spinothalamic Tract
3. Crude Touch: Anterior Spinothalamic Tract

Dorsal Column, Medial Lemniscal Tract (DCML)

Qualitative Pathways (to determine characteristics of stimulus):

1. Discriminating Touch: (pressure, vibration, discriminating touch/texture)
2. Joint Position Sense: (proprioception)

Indeterminate (likely a combination of ALS and DCML)

Somatic Ambient Pathways (possibly to determine time/environmental conditions):
Light/Electromagnetic[1, 2]

DISCUSSION:

One important benefit of utilizing the functional assessment tool of Applied Kinesiology is that the examiner is able to compare pre- and post- treatment patient responses in real time. As an example, the use of therapy localization, i.e., haptic mechanoreceptive input, in a given location on the body allows practitioners to elicit patterns of potential dysfunction otherwise clinically invisible. This information can be compared before and following a given treatment to determine the success of the intervention. An excellent discussion of the neurology involved in therapy localization authored by Sprieser is worthy of review.[3]

Similarly, polymodal challenges associated with the various specific receptor types and spinal cord pathways comprise another methodology to elicit, challenge, or provoke neurologic responses not found by any other means. By using these challenges, the practitioner may assess the integrity of the homeostatic mechanisms as a whole and evaluate the success of a given treatment strategy via the feedback observed.

Generally speaking, clinical examinations occur under fairly consistent static environmental conditions including those of temperature, lighting, sound, color, smell, etc. This artificial environment creates an inherent bias in the patient's neuraxis and homeostatic mechanisms. Interpretation of responses to the clinician's provocative testing is necessarily affected by that bias. By altering conditions, even focally, the clinician can remove some of the bias intrinsic to the examination room to reveal previously undetected homeostatic compromises.

PROCEDURE:

1. Begin with a normotonic strong indicator muscle (SIM),

2. Assess a suspected area of dysfunction using therapy localization while testing a SIM.

3. If this causes SIM to inhibit, correct according to standard AK procedures and retest once the SIM no longer inhibits, or if it did not inhibit to begin with:

4. Apply different sensory modalities (listed below) to same area and retest a SIM:

    A. ALS:
        i. pinch (pain)
        ii. ice/heat (temperature)
        iii. gentle punch/bump (crude touch)

    B. DCML:
        i. squeeze area broadly, deeply (pressure)
        ii. apply handle of 128k tuning fork (vibration)
        iii. gently and quickly rub with swab (discriminating touch/texture)
        iv. place joints in various positions, particularly distal joints (proprioception)

    C. Indeterminate:
        i. apply light to skin (using small flashlight, such as used in a pupillary exam, with low ambient lighting)

If one of the above modalities causes inhibition of SIM, it can be thought of as a kind of multimodal therapy localization which indicates the *location* of a problem but not the *cause* of the problem. However, it must be kept in mind that utilizing this method also may generate a global homeostatic response. If that homeostatic response is maladaptive, the SIM will become inhibited. Therefore, it needs to be determined on a case by case basis whether the challenge reveals a focal issue or systemic homeostatic maladaptation. To do this:

5. Apply modality (-ies) which caused inhibition of the SIM to multiple locations around the body, caudad, cephalad, and bilaterally in extremities, to determine if inhibition will occur in more than one location.

If SIM inhibits only in one area, it is likely a focal problem. If the SIM inhibits in multiple locations on *one side* of the body only, consider further evaluation for cortical hemisphericity and its autonomic sequelae. There are several papers published in previous ICAK proceedings available which can assist in this process.[4, 5, 6, 7] It is also important to remain aware of the effects of stimulating with certain modalities over visceral referred pain areas.[8]

If a SIM inhibits in multiple areas, it is likely a globally maladapted homeostatic response. Regardless of whether the issue is focal or systemic, it is always important to determine causality via a standard Applied Kinesiology regime. After a treatment intervention is employed, the above protocol may be used once again to assess the success of that treatment and/or the status of the homeostatic mechanism.

CONCLUSION:

Polymodal challenging has been useful in assisting in the diagnosis of problematic areas, and to differentiate between focal or systemic issues. It allows for deeper evaluation of the integrity of nervous system and concomitant autonomic and other homeostatic abnormalities. Increasing the complexity of challenges allows greater insight into more subtle levels of dysfunction and will be expanded upon in a companion paper entitled "Compound Polymodal Afferent Challenging (Part II of II)".[9]

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Compound Polymodal Afferent Challenging (Part II of II)

Jac Daccardi, D.C., F.I.A.M.A., F.A.S.A., D.A.A.I.M.

ABSTRACT:
As a brief sequel to the companion paper entitled "Polymodal Afferent Challenging (Part I of II)",[1] this paper discusses the next level of complexity for eliciting subclinical dyshomeostases and evaluation of functional neurologic integrity. Once having ruled out a peripheral focal lesion, hemisphericity, and other dyshomeostases by employing the protocol outlined in that paper, a deeper level of evaluation outlined herein, can be undertaken by combining types of stressors or "challenges".

Key Indexing Terms: Polymodal Challenging, Dyshomeostasis, Functional Neurology, Therapy Localization

INTRODUCTION:
Neurologic and homeostatic "challenges" are systemic stressors used in Applied Kinesiology to elicit responses which drive motoric changes. These changes are subsequently assessed via manual muscle testing. The degree to which the organism can maintain homeostasis under the influence of various stressors is indicative of the degree to which it can adapt successfully in the environment. However, as treatment progresses the expectation is that it becomes increasingly more difficult for the clinician to elicit responses using existing tools and requires the ability to find maladaptive states even when they are not clearly evident. The greater the ability for the clinician to push the patient into a maladaptive state by using challenges, the more opportunity there is to intervene so as to increase the ability of the patient to maintain homeostasis at increasingly higher levels of stress. This may be accomplished by increasing the level of complexity of stressors on the patient, allowing deeper more subtle levels of dysfunction to be revealed.

PROCEDURE:
Borrowing the procedure from the companion paper "Polymodal Afferent Challenging (Part I of II)",[2] the clinician can now use multiple modalities simultaneously so as to increase the levels of stress on the patient's system and thus reveal a more subtle degree of dyshomeostasis.

This challenge protocol can begin given these conditions:

1. Various permutations of Therapy Localization do not cause normotonic Strong Indicator Muscle (SIM) inhibition,
2. The challenges (below) have been applied singly to given focal area and do not cause a SIM to inhibit,
3. Challenges applied singly do not cause SIM inhibition when applied in multiple locations on the body *unilaterally*,
4. Challenges applied singly do not cause SIM inhibition when applied anywhere on body.

After the above conditions are met, increasing levels of stress can be applied: first within one system such as the ALS, then the DCML/Indeterminate system.

1. Apply two of the below simultaneously, in different variations, apply all three if two do not elicit response.

Test using a SIM:

A. ALS:
   i. pinch (pain)
   ii. ice/heat (temperature)
   iii. gentle punch/bump (crude touch)

2. If SIM inhibits, correct according to standard Applied Kinesiology protocols, if not, or if after correction SIM remains facilitated,

3. Apply two of the below in different combinations, apply three simultaneous challenges if two do not elicit a response. Apply four simultaneous challenges if three do not elicit a response and so on. The idea is to increase the amount of complexity of stimulation if no response is elicited:

B. DCML:
   i. squeeze area broadly, deeply (pressure)
   ii. apply handle of a vibrating 128k tuning fork (vibration)
   iii. gently and quickly rub with swab (discriminating touch/texture)
   iv. place joints in various positions, particularly distal joints (proprioception)

C. Indeterminate:
   i. apply light to skin (using small flashlight, such as used in a pupillary exam)

4. If SIM inhibits, correct according to standard Applied Kinesiology protocols. If it does not inhibit, or if after intervention the SIM tests as facilitated, again increase the level of complexity:

5. Combine challenges from both ALS and DCML/Indeterminate systems in various permutations and check for SIM inhibition. Correct according to standard Applied Kinesiology protocols until no combination of challenges cause SIM inhibition.

CONCLUSION:

Increasing the complexity of challenges for the purpose of eliciting dyshomeostasis and functional neurologic deafferentation provides the clinician a greater diagnostic window into more subtle levels of neurologic and metabolic dysfunction. This discussion can be considered a beginning set of guidelines which should allow clinicians to expand upon what is presented here. It can lay the groundwork for further refining skills in the areas of investigation of more subtle dyshomeostatic phenomena, and for expanding the knowledge base for all concerned with these matters.

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Considerations and Treatment of Persistent Conjugate Eye Movement Dysfunction and Ocular Lock

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ABSTRACT:
Discussed herein is a discussion of a novel treatment of conjugate eye movement dysfunction and the ocular lock phenomenon refractory to, or persistently recurring after standard Applied Kinesiology treatment. It appears that these conditions manifest secondarily to physiological neuronal irritability and/or long term potentiation (LTP) associated with trauma.

Key Indexing Terms: Conjugate Eye Movement, Ocular Lock, Shen Men, Auricular Acupuncture, Maladaptive Plasticity, Long Term Potentiation (LTP), Injury Recall Technique, Eyes Into Distortion (EID), Eyes Out of Distortion (EOD)

INTRODUCTION:
Conjugate eye movement dysfunction and the "ocular lock" phenomenon have been found to be refractory to, or recurrent after standard Applied Kinesiology treatments. Subsequent to elimination of possible sources of dysfunction associated with what are known in Applied Kinesiology as the "five factors of the intervertebral foramen" and ruling out the "eyes into distortion" and "eyes out of distortion" phenomena, there was either a persistence or recurrence of one or both types of dysfunction in ocular motion.

DISCUSSION:
For the purposes of this paper, "conjugate eye movement dysfunction" indicates an observable lesion in which eyes do not track a target in a coordinated fashion. Regardless of observability, this term also represents the systemic motoric result of tracking an object in such an uncoordinated manner, which is that it may cause inhibition of a normotonic or "strong" indicator muscle when tested manually. Autonomic sequelae may also be present and evaluated but will be left out of this discussion given the generally advanced aptitude of the intended reader toward manual muscle testing procedures.

"Ocular lock" in this paper is considered a subset of conjugate eye movement dysfunction where the lesion is not necessarily directly observable, although saccadic intrusions may present themselves during ocular circumduction. Notably, however there are motoric changes resulting from eye position alterations. In this case, the changes may be directly attributable to: 1. Decreased time to fatigue[1] of the involved neuronal pools resulting in what could be considered to be a kind of neurologic disorganization,[2] 2. Distortions in the cranial sacral primary respiratory mechanism,[3] the entire stomatognatic system,[4] or otherwise structurally,[5] leading to this fatiguability, 3. Postural distortions such as those described as the "eyes into distortion" and "eyes out of distortion" phenomena.[6]

It must also be noted that this approach does not take into consideration ablative lesions affecting the extraocular muscles or a diaschisis in which dysfunctional upstream neuronal pools have caused an ablative or degenerative lesion in downstream cranial nerve nuclei or in the cranial nerves themselves. This in itself is a cause of generalized neurologic disorganization, but is beyond the scope of this paper and may be discussed elsewhere subsequently.

It appears that in some cases an identifiable trauma has occurred primarily affecting the neck and head, whereas in other cases there was no such identifiable trauma to that area, but rather distally. Regardless, it seems that there has been some degree of maladaptive neural plasticity in these neuronal pathways.[7]

Maladaptive plasticity may be thought of as an expression of aberrant Long Term Potentiations (LTP's) secondary to trauma,[8] or as a product of physiological irritability. These maladaptations may cause alterations to proprioceptive

information originating in extraocular muscle spindles and myotendinous cylinders (palisade endings) and travel via the sensory portions of cranial nerves III, IV, and VI.[9] Discrepancies of positional information between these pathways may cause issues with integration and could explain why conjugate extraocular movement may lose coordination.

There is substantial evidence that the cell bodies for the afferent portions of cranial nerves III, IV, and VI are found in the trigeminal ganglion.[10] Considering that all sensory information from the face converges in the trigeminal ganglion via the various distributions of cranial nerve V, the possibility for alterations of eye movements resulting from dysfunction in areas distal to the orbit is not too difficult to imagine. Nor would it be difficult to conceive that conjugate eye movement dysfunction could affect other areas of the neuraxis, as it has been demonstrated that afferent signals from the extraocular muscles are found to have effects in cerebellum, vestibular system, and other places in the brain.[11]

PROCEDURE:
This procedure can be thought of in Applied Kinesiology as Injury Recall Technique[12, 13] to the extraocular muscles.

Engage the extra-ocular muscles while manually testing a normotonic strong indicator muscle (SIM). Like other forms of assessing "ocular lock", the eye position(s) which inhibit the SIM must first be determined. Position eyes superiorly, inferiorly, laterally to right and left, and inferiorly and superiorly to right and left, Then slowly circumduct eyes both clockwise and counterclockwise to attempt to discern positions which need to be addressed.

Once the correct position is determined, it may be tested for the influence of aberrant Long Term Potentiations (LTP) by having the patient turn the eyes into the direction causing indicator muscle inhibition while simultaneously therapy localizing the Shen Men auricular acupuncture point.[14] (Fig. 1). If the inhibited indicator muscle then facilitates, this is an indication that an aberrant LTP is disturbing ocular motor coordination.

To treat this condition, have the patient move the eyes into the *opposite* or *"mirror-image"* position. For example, if the inhibition is occurring with the eyes at the 10 o'clock position, have the patient put the eyes into the 4 o'clock position for correction. With the eyes in the mirror-image position stimulate the Shen Men points bilaterally either individually or simultaneously with a 635 nm laser, with a tei-shin needle, or with fingers for 5-10 seconds. After treatment, retest indicator with eyes in position which caused inhibition. If this now allows indicator muscle to remained facilitated, retest all extraocular positions again to determine the need to repeat the procedure with the eyes in a different orientation.

If this procedure did not cause indicator muscle to facilitate with eyes in the position which originally caused inhibition, yet *facilitates* when patient therapy localizes Shen Men, the source of aberrant information has not yet been found, and must be located via standard IRT QA protocols[15] or as outlined in the paper "Utilizing the Shen Men Point for Assessment and Correction of Aberrant Neurologic Long-Term Potentiations Associated With Trauma."[16]

Summary of the technique:

1. Determine eye position which causes SIM to inhibit.

2. With eyes in the position which caused SIM to inhibit, have the patient therapy localize the Shen Men acupuncture point.

3. If inhibited muscle facilitates, there is indication that there is an extraocular LTP present.

4. Turn eyes to "mirror image" position (opposite) of the position which caused SIM to inhibit, and stimulate the Shen Men acupuncture point.

5. Retest indicator muscle after treatment. If indicator muscle remains facilitated, repeat the procedure to determine the need for another treatment with eyes in a different orientation.

6. If SIM remains inhibited with the eyes in the position which originally caused inhibition, seek other sources of causality according to protocol suggested in the paper indicated above.

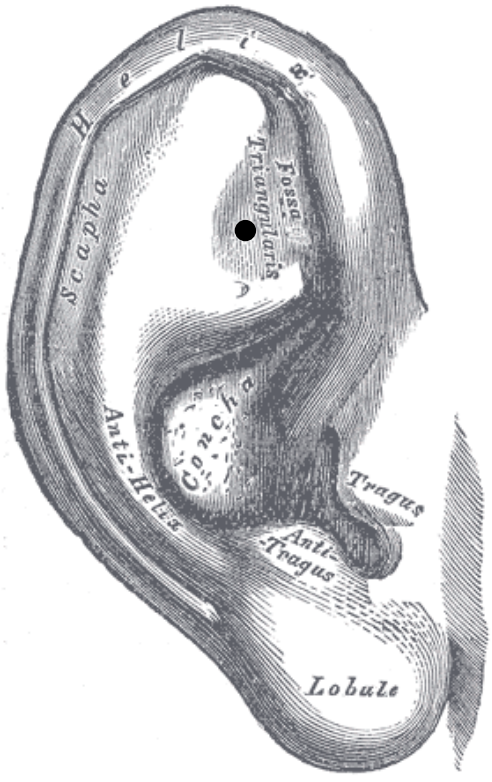

Fig. 1, Shen Men. Acupuncture point is found in the fossa triangularis, indicated by a black dot.

CONCLUSION:
Utilizing this approach to assessing and treating persistent conjugate eye movement dysfunction has proven clinically useful after typical methods of Applied Kinesiology treatment were unable to sufficiently address the issue. While it is likely that using this method of removing aberrant influences to extraocular muscle firing patterns allows more accurate proprioceptive feedback and thus greater motor control, more investigation into the mechanism of action for this treatment should be undertaken in the future.

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Illustrations

Figure 1. Shen Men. Gray H. Anatomy, Descriptive and Applied. 20th ed. Philadelphia: Lea & Febiger;1910. New York: Bartelby. com; 2000

Holistic Approach to Chronic Kidney Disease and Hypertension Using Applied Kinesiology

Adam Davis, D.C.

ABSTRACT:
The objective of this case study is to focus chiropractic treatment on the underlying cause of disease, facilitating the body's innate healing ability. This case focuses on management of high blood pressure through treatment of the kidneys using Applied Kinesiology techniques. The patient in this case suffers from chronic kidney disease and hypertension and is unable to take medication due to side effects. Following Applied Kinesiology treatment, the patient's blood chemistry results showed a slowed progression of kidney dysfunction and improvement in blood pressure. Once improvement of kidney function occurs, auto-regulation of blood pressure takes place. The results of this case study conclude Applied Kinesiology facilitates the body's recuperative ability by balancing the sympathetic/parasympathetic nervous system, ultimately, resulting in non-pharmaceutical management of blood pressure.

INTRODUCTION:
Since 2006, the patient has been involved in University Hospitals of Cleveland Chronic Renal Insufficiency Cohort (CRIC) study, being examined yearly, but never treated. The patient's most recent CRIC study results revealed a decrease in kidney function measured as stage three - one being optimal function and five requiring dialysis. Over the last six years the patient's test results indicate declining renal function.

The patient is a sixty-five year old male with a twelve and ten year history of kidney disease and hypertension, respectively. He has no other co-morbid conditions and has been treated by his medical doctor for hypertension since 2000 with numerous types of medications. The patient states after a couple weeks of pharmaceutical therapy he gets severe headaches. He understands the repercussions of prolonged hypertension, however, feels his quality of life is worse with treatment. He knew he needed a new approach so after many failed trials of medicinal care the patient decided to try a holistic approach. The patient received chiropractic treatment weekly for four weeks, and then once monthly, over a three month period, utilizing the diagnostic and treatment techniques within Applied Kinesiology. Blood work was repeated, showing less of a decline in kidney function and his blood pressure stayed within normal limits.

METHOD:
This patient was tested for cranial faults and the following were found and corrected: internal frontal on the right, bilateral lambdoidal sutures, glabella fault, interosseous fault, bilateral mastoid inspiration assist, cruciate and sagittal suture faults. Manual muscle testing revealed subluxations at C1, C5, T9, T12, L1, L3, L5 and a right superior talus malposition. The subluxations were corrected using manual manipulation and intraosseous subluxations were corrected using the percussor from Impac. A Category 1 pelvic fault was found and corrected with pelvic blocking. A bilateral psoas, gluteus maximus, teres major, lower trapezius, and bilateral neck extensor inhibitions were found and an occipital, upper cervical, thoracic, thoracolumbar, and lumbar fixation were corrected respectively (1). The patient's inhibited left gluteus medius facilitated with Injury Recall Technique (IRT) to the pelvic floor. An inhibited right gluteus medius facilitated with stimulation to bladder acupuncture head point while therapy localizing to the pelvic floor. (The patient had a history of right-sided inguinal hernia.) The patient tested positive for I.R.T to the left sacrotuberous ligament (2) and was also treated for a superior stomach malposition (hiatal hernia), open ileocecal valve and an inferior prostate malposition. The patient also presented with a positive Ragland's sign and a weakened right sartorious, which strengthened to the neurolymphatic, neurovascular, neurological, and acupuncture meridian connector. The patient's right psoas was not facilitated and strengthened to the neurovascular, neurolymphatic, cranial, associated neurological component and acupuncture meridian connector. All factors were treated as per standard ICAK treatment, and a Tei Shin was used to stimulate the kidney and circulation sex tonification points. (1).

Using supplementation with Arginex and Renafood the patient was asked to taste the supplement while Applied Kinesiology testing was performed. The patient exhibited facilitation of the psoas, improved range of motion and reduction of neurolymphatic tenderness with both Arginex and Renafood. The patient was given Renafood and Arginex, by Standard Process, directed to take one three times per day to help improve kidney function. Renafood helps support kidney function by combining vitamins A and C with kidney bean plant abstract, bovine kidney and bovine kidney protomorphogen extract, wheat germ, oat flour, tillandsia, and beet and carrot root. Arginex helps the kidneys remove metabolic byproducts and toxins from the blood. Arginex contains vitamin A with buckwheat leaf and seed, pea juice, oat flour, bovine liver, beet root and leaf, ascorbic acid, and a special yeast strain of Rhizopus oryzae grown on tillandsia.

LAB RESULTS:

CRIC Study:

2007 BP 158/64 Urea Nitrogen 31
2009 BP 158/74 Urea Nitrogen 37
2010 BP 158/74 Urea Nitrogen 53

Applied Kinesiology Study:

Treatment dated 12/8/10: Patient's blood pressure was 152/78.
In office urinalysis showed trace blood and protein.
At home reading 12/9/10: Patient's blood pressure was 126/86.
Treatment dated 12/15/10: Patient's blood pressure was 142/72.
Treatment dated 12/22/10: Patient's blood pressure was 132/80.
Treatment dated 12/27/10: Patient's blood pressure was 138/84.
Treatment dated 1/19/10: Patient's blood pressure was 160/80. The patient stated he chased his dog around prior to his exam.
Treatment dated 2/9/10: Patient's blood pressure was 140/72.
Blood work dated 2/18/2011 Urea Nitrogen 59
Patient's urinalysis was clear of protein but showed trace blood.

RESULT OF TREATMENT:

On the first visit, the patient had been off blood pressure medication for one week and his blood pressure measured 152/78. The following morning the patient took his blood pressure at home and reported improvement of 126/86. The patient stated, "This is the lowest my blood pressure has been in years." The patient returned weekly for treatments resulting in gradual reduction of his blood pressure. The patient had no complaints of headaches and reported feeling great. As treatment progressed, Ragland's Test was negative. The patient's blood pressure continues to measure around 140/72 with treatment.

Although the most recent blood work results (see Lab Results above) showed a continued decline of kidney function, the decline has slowed. This decline is evidenced by the patient's urea nitrogen still increasing by four points which is much less of a decline in function than the previous year. The CRIC study of 2010 showed a sixteen point decline in function. Therefore the kidney function would be improving in a still chronic problem. This shows a slowing of the disease process.

DISCUSSION:

The human body is not ignorant and should not be treated as such. It has amazing healing capabilities when interferences caused by noxious stimuli have been eliminated. It is not a simple instrument that only breaks down in a linear fashion instead it is an incredible machine that changes internal parameters every second in order to function properly. Properly applied techniques of Applied Kinesiology and basic understanding of biochemical and biomechanical mechanisms, can correct the human body and actualize its potential to create homeostasis. Therefore, the thought process on improving the function of the body cannot be linear. The interaction between

Applied Kinesiology muscle testing and the patient's nervous system lends itself to easily being called an art. To master this art the practitioner needs to understand the nervous system's interaction with the whole body and manipulate it to unlock its full healing potential. We, as physicians, need to search for the underlying causes of pathology. High blood pressure, for example, is normally just a symptom of an underlying problem. Correction of the real problem can correct the hypertensive state. The body raises blood pressure in order to continually function properly. Prescribing a medication, although sometimes needed, does not address the reason the body increased blood pressure in the first place.

Not only does the cardiovascular system need to be addressed in this disease processes, but endocrine imbalances, kidney and adrenal function, cranial-sacral function, acupuncture meridian connectors, along with proper nutrition (iron, antioxidants, kidney, adrenal support, etc.) all should be investigated for dysfunction (3). If any one of these parameters is not perfect, the body manifests the problem as high blood pressure. It is unrealistic to believe that the body changes parameters for no reason. If the body's blood pressure can change without medication, it is logical to assume it can change back. All of these avenues should be investigated before prescribing medications.

In this case the patient was frustrated with the side effects of his medications. The two most likely explanations for the iatrogenic headaches would be a medicinal induced hypotension headache or a toxicity headache. Poor kidney function would cause a reduced phase three detoxification process leading to toxicity. Although the renal lab work did not show reversal of kidney damage, the patient's blood pressure responded as predicted. Following the most basic testing and treatment protocols from standard ICAK teachings, the lab results improved and the patient reported a better quality of life.

CONCLUSION:

As hypothesized, this author proves that by treating the underlying causes of a patient's hypertension, the body can normalize blood pressure without the use of medication. Once the patient's kidney function improved auto-regulation of blood pressure occurred. The results of this case study prove high blood pressure is a symptom of a deeper underlying cause, as in most cases. If the astute physician addresses the underlying cause of the problem then the body can normalize its blood pressure. Treatment, in this case, is concentrated to the blood pressure related organ. This is a great representation of "treating the patient and not the condition." Through clinical experience it has been shown that certain Applied Kinesiology procedures have dramatic effects and outcomes on naturally controlling blood pressure.

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Non-Invasive Treatment of Acute Cholecystitis Using Applied Kinesiology

Adam Davis, D.C.

ABSTRACT:
The objective of this case study is to justify that a cholecystectomy is not the only option for cholecystitis. The patient in this case suffered from acute cholecystitis and was recommended by his medical doctor to undergo a cholecystectomy. The patient refused and, subsequently, was treated utilizing the diagnostic and treatment techniques within Applied Kinesiology along with proper supplementation and diet/lifestyle changes. Following treatment, the patient's blood results showed significant improvement in hepatobiliary function. The results of this case study conclude Applied Kinesiology facilitates the body's recuperative ability by balancing the sympathetic/parasympathetic nervous system, ultimately, resulting in resolution of acute conditions, like cholecystitis.

INTRODUCTION:
The patient, a 39 year old, 250lb, six foot two inch male presented with nausea, five days of acute, right upper quadrant pain that radiated to his right, mid-thoracic region and one week of orange colored urine and clay colored stool. This patient is a father of four and has no caloric restrictions on his diet as evidenced by mild obesity and stating "after eating my meal, I usually finish my kid's leftovers." He was recently admitted to the hospital a few days prior for cholecystitis proved by several hepatobiliary function tests. The results showed elevated blood levels of bilirubin, alanine aminotransferase (ALT), aspartate aminotransferase (AST). A sonogram showed a thickening of the gallbladder wall. As a result, the patient's medical physician recommended an immediate cholecystectomy. The patient was not pleased with this "only option" and checked himself out of the hospital. He explained to the physician he would like a second opinion and if his symptoms and blood work did not improve would elect to have the surgery. His medical doctor agreed and instructed the patient to have follow-up blood work at one and six weeks.

The patient had chiropractic treatment once a week for six weeks utilizing the diagnostic and treatment techniques within Applied Kinesiology. After the sixth week, blood work was repeated. The results showed significant improvement in hepatobiliary function. After the sixth treatment the patient continued using recommended supplementation and following dietary changes. As a result, he continued to lose weight and remain pain free.

METHOD:
The patient was tested for cranial faults and the following were found and corrected: glabella fault, temporal bulge on the right, parietal descent on the left, interosseous fault, and both the cruciate and saggital sutures. Manual muscle testing revealed subluxations at C5, T4, T7, T9, and L1. These subluxations and associated intraosseous subluxations were corrected using manual manipulation. A category 1 pelvic fault was found and corrected with pelvic blocking. A bilateral gluteus maximus, popliteus, teres major, and lower trapezius inhibitions were found and an upper and lower cervical, thoracic, and thoracolumbar fixation were corrected respectively. The patient's right popliteus was not facilitated and strengthened to the neurovascular, neurolymphatic, cranial, associated neurological component and acupuncture tonification point for the gallbladder.

All factors were treated as per standard ICAK treatment, and a Tei Shin was used to stimulate the gallbladder tonification point. Simultaneous stimulation of the gallbladder tonification and associated points were utilized for pain reduction (1). Stimulation to the gallbladder head point was applied with the patient therapy localizing over the right upper quadrant to reduce pain.

The patient had fascilitation of the popliteus when Aspirin, Acetaminophen, and Ibuprofen mix was tasted. The patient had fascilitation of the popliteus, improved range of motion when fish oil was tasted (2). The popliteus also strengthened, improved range of motion and reduction of neurolymphatic tenderness when A-F Betafood was tasted (1).

A-F Betafood contains vitamins A, B6, and iodine with carrot and beet root, oat flour, beet leaf, wheat germ, calcium lactate, magnesium citrate, bovine liver, kidney, prostate, orchic extract, liver fat extract, nutritional yeast, alfalfa flour, flaxseed oil, mixed tocopherols, and soybean lecithin. Tuna Omega-3 Oil contains tuna oil with DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid).

The patient was put on a low fat calorie restricted diet, and was instructed to incorporate fresh beets, apples, and fiber into his diet. The patient was given A-F Betafood, by Standard Process, directed to take one every two hours for the first week, then three per meal for two months, to help decrease accumulation of fat in the liver. He was also given Tuna Omega-3 Oil, by Standard Process, directed to take one three times a day for two months, to help decrease inflammation.

LAB RESULTS:

6/17/07: Initial blood work: Alkaline phosphatase 267, ALT 569, AST 147, total bilirubin 1.97. A sonogram of the gallbladder showed a thickened wall, but no obvious gallstones. Urine has an orange tint. Urinalysis shows small amounts of bilirubin. Stools are clay colored.

6/18/07: Patient had fasted for two days. Follow up blood work: Alk. Phos. 234, ALT 476, AST 119, total bilirubin 1.57.

6/25/07: One week follow up: Alk. Phos. 137, ALT 271, AST 63, total bilirubin 0.90. Urine and stools are normal.

7/29/07: Six week follow up: Alk. Phos. 104, ALT 168, AST 49, total bilirubin 0.76. Urinalysis and stools are normal. No follow up gallbladder sonogram was obtained.

RESULTS OF TREATMENT:

On the first visit, the patient was a few days post cholecystitis. The patient's pain subsided due to the pain medications and twenty four hours of fasting while in the hospital. Over a six week period of dietary changes, chiropractic treatment utilizing Applied Kinesiology, and supplementation, the patient had a gradual normalization of hepatobiliary blood chemistry. The patient reported his urine gradually returning to yellow and his stools become regular in appearance. The patient also had a decrease in pain following the first treatment. The patient had blood work taken one and six weeks post attack to continually monitor his hepatobiliary function. The results, listed above, showed significant improvement in liver and gallbladder function and eventually reaching normal range. The patient has not had any symptoms or related pain since that incident.

DISCUSSION:

The main principle within Applied Kinesiology is to decrease the cumulative noxious stimuli experienced by the patient, promoting the inherent ability of the body to heal its self. Nutrition and supplementation play a key role in this process since most disease processes come from the continuation of poor habits. Surgery, when all other options have been exhausted, is necessary and does save lives, but should not be the first rung on the ladder to health. Compounding the disease process is the inadequate teaching of patients about dietary guidance following surgical intervention. Also, once the patient is out of pain they tend to continue down the road of poor choices if post-op teaching is not effective. There is perceived disconnect between nutrition, biochemical and disease process in the medical community that prompts physicians to first recommend surgery before lifestyle change. Removing an organ does not change a lifestyle or improve the body's performance. There can be myriad of other health issues that can come from organ removal. It is unrealistic to believe that the body continues functionally optimally once an organ is removed.

In the discussed case study, this patient wisely chose chiropractic treatment over surgery. Besides the fact the average cost of a cholecystectomy is $8,100 (3), the patient elected not to have the surgery. The patient's prognosis upon discharge from the hospital was appropriately classified as "fair" if only dietary changes were made. However, as demonstrated in this case study, with chiropractic treatment, nutrition and lifestyle coaching, his prognosis is complete resolution of disease. He knew the underlying cause of his liver and gallbladder dysfunction was poor diet and lifestyle habits. This patient's responsibility for his own health is evidenced in his determination to change this unhealthy lifestyle. Patient compliance is the key to a positive outcome since a physician's capacity to heal is only optimally attained if the patient takes responsibility of their own health.

CONCLUSION:

Although little research has been done in this area do to the acuteness of the situation, it is shown, at least in this study, that the surgical alternative was successful in resolving the patient's acute cholecystitis. In this case study, the patient's liver and gallbladder responded as hypothesized. Overall, the patient saved roughly $8000 and any future complications by seeking chiropractic treatment. It is apparent in this particular case that standard Applied Kinesiology facilitated the body's recuperative ability, balanced the sympathetic/parasympathetic nervous system, and led to these particular subjective and objective results.

As the great Thomas Edison stated, "The doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet and in the cause and prevention of disease" and as the author of this case study stated "a good doctor cures disease, a great doctor prevents it."

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Posterior Sacroiliac Ligament Technique "Sacral Therapy in Motion Technique"

Kenneth Feder, D.C., DIBAK

ABSTRACT:
Injury to the posterior ligaments which hold the sacrum to the hip bones and lumbar spine can cause the most devastating low back and leg pain. Low back pain is the fifth most common reason for all physician visits. In the United States approximately 90% of adults experience back pain at some time in their lives and 50% of persons in the working population have back pain every year. It is possible that the most common source of low back pain originates from the contiguous ilio-lumbar and upper dorsal sacroiliac ligament.

ANATOMY: POSTERIOR ARTICULATIONS OF THE PELVIS, SACRUM, AND LUMBAR SPINE:

The posterior ligaments connecting the bones of the pelvis, sacrum, and lumbar spine are divided into the following groups:

I. THOSE CONNECTING THE SACRUM AND ILIUM
The posterior sacroiliac ligament is situated in a deep depression between the sacrum and the ilium. It is very strong and forms the chief band of union between the bones. The upper part, the short posterior sacroiliac ligament, is nearly horizontal in direction, and passes from the first and second transverse tubercles on the back of the sacrum to the tuberosity of the ilium. The lower part, the long posterior sacroiliac ligament, is oblique in direction and attached by one extremity to the third transverse tubercle of the back of the sacrum and by the other to the posterior superior spine of the ilium. The interosseous sacroiliac ligament lies deep to the posterior ligament and consists of a series of short, strong fibers connecting the tuberosities of the sacrum and ilium.

II. THOSE PASSING BETWEEN THE SACRUM AND ISCHIUM
Ligaments that connect the sacrum and ishium consist of the sacrotuberous and sacrospinous ligaments. The sacrotuberous ligament is situated at the lower and back part of the pelvis. It is flat and triangular in form, narrower in the middle than at the ends, and attached by it's broad base to the posterior inferior spine of the ilium to the forth and fifth transverse tubercles at the sacrum and to the lower part at the lateral margin of that bone and the coccyx. It passes obliquely downward, forward, and lateralwards, and becomes narrow and thick. At it's insertion into the inner margin of the tuberosity of the ischium it increases in breadth and is prolonged forward along the inner margin of the ramus as the falciform process, the free concave edge of which gives attachment to the obteretor fascia. One of its surfaces is turned toward the perineum, the other toward the obturator inturnus. The lower border of the ligament is directly continuous with the tendon of origin at the long head of the biceps femoris. The sacrospinous ligament is thin and triangular in form. It is attached by its apex to the spine of the ischium and medially by its broad base to the lateral margins of the sacrum and coccyx in front of the sacrotuberous ligament, with which its fibers are intermingled.

III. THOSE UNITING THE SACRUM AND COCCYX
The posterior sacrococcygeal ligament is a flat band which arises from the origin of the lower surface at the sacral canal and descends to be inserted into the posterior surface at the coccyx. This ligament completes the lower and back part of the sacral canal. The lateral sacrococcygeal ligament exists on either side of the coccyx and connects the transverse process of the coccyx to the lower lateral angle of the sacrum. It completes the foramen at the 5th sacral nerve.

IV. THOSE CONNECTING THE LUMBAR SPINE AND THE SACRUM AND ILIUM
The iliolumbar ligament is a strong ligament passing from the tip of the transverse process of the fourth lumbar vertebra to the posterior part of the inner lip of the iliac crest. It forms the thickened lower border of two of the

layers of the thoracolumbar fascia. Occasionally, a small ligamentous band stretches from the tip of the transverse process of the fourth vertebra down to the iliac crest, behind the main ligament.

LIGAMENT STRUCTURE, FUNCTION, AND RELATED SYMPTOMS:
In many patients with a specific low back pain or peripatum pelvic pain, pain is experienced in the region in which the long dorsal sacroiliac ligament is located. It can be easily palpated in the area directly caudal to the posterior superior iliac spine. The long dorsal sacroiliac ligament has close relations with the erector spinae muscles, the posterior layer of the thoracolumbar fascia, and a specific part of the sacrotuberous ligament. The ligament is tensed when the sacroiliac joints are counternutated and slackened when nutated. The reverse holds for the sacrotuberous ligament. Slackening of the long dorsal sacroiliac ligament can be counterbalanced by both the sacrotuberous ligament and the erector spinae muscles. The dorsal sacroiliac ligaments stabilize the sacroiliac joint. When these ligaments become inflammed or relaxed due to trauma or degenerative changes, they can cause referred pain. The upper dorsal sacroiliac ligament refers to the posteriolateral and anterior thigh above the knee and lateral calf. The pain is generally described as an ache but may present as burning, tingling, or numbness.

The long posterior sacroiliac ligament is directly caudal to the posterior superior iliac spine and connects the posterior superior iliac spine and a small part of the third and fourth segment of the sacrum. Tenderness is often found just below the posterior superior iliac spine. The sacroiliac joint pain may be due to an entrapment neuropathy of the lateral branches of the dorsal sacral rami of the long posterior sacroiliac ligament (LPSL). The sacrotuberous ligament (STL) restricts sacral counternutation. Sacral nutation increases in load-bearing situations such as standing and sitting. Both ligaments (STL and LPSL) are affected by muscular contractions. Traction to the biceps femoris greatly increases tension to the STL, with hardly any influence on the LPSL. Shortening of the biceps femoris has been shown to limit sacral nutation by way of the STL relating short hamstrings to lower back pain. Traction of the thoracolumbar fascia in the direction of the latissimus dorsi muscle causes sacral nutation and slackens the LPSC, and increased tension in the thoraco-lumbar fascia or fascia latae will have the effect at exerting tension on these ligaments. The iliolumbar ligament when involved can refer to the multifidus triangle, groin gluteus medius and minimus area, and greater trochanter. The upper dorsal sacroiliac ligament refers to the posteriolateral and anterior thigh above the knee and lateral calf.

A/K EXAMINATION PROCEDURE:
The areas of the posterior sacroiliac ligaments may therapy localize when the patient is prone. Therapy localization may only show when the patient is in a weight bearing position and incorporates different bending and twisting positions to reveal a positive TL. The most obvious position for a positive may be when the patient flexes to a 10–20 degree angle.

Palpation of the iliolumbar ligaments and posterior sacroiliac ligaments may recreate local pain and even create the referred pain. Orthopedic tests to evaluate the posterior sacroiliac joints should always be performed. These tests include Yeoman's and evaluation to rule out Maigne Syndrome of referred pain to the iliac crest. A thorough examination of the gluteus minimus, tensor fascia lata, rectus femoris, piriformis, vastus lateralis and intermedius, quadratus luborum, and gluteus maximus as they can result in myotogenous referral down the lateral thigh in a similar distribution as the LS nerve root and sacroiliac ligaments. Myofascial trigger points in gluteus minimus present pain in the lateral thigh and calf. If therapy localization does not reveal a problem in the posterior sacral ligaments, an involvement may still be present if palpation of the ligaments illicits pain. I have found if palpation of any area of the ligament produces pain then any area upon which pain is produced is probably involved and requires treatment. A normal ligament should not be painful on palpation.

CORRECTION PROCEDURE:
Once the areas on the posterior sacroiliac ligaments have been identified by therapy localization and palpation, all of the other areas will be treated as follows:

1. The patient is placed in a standing position and asked to bend or flex to approximately twenty degrees. The doctor massages the involved points on the ligaments as the patient walks slowly forward three to four steps and then slowly backward three to four steps. The treatment procedure is repeated for approximately five to eight repeated patterns of forward and backward movement. Each pattern involves a movement of forward backward movement. A positive result will be that the patient will be able to flex forward easier and with reduced pain. The patient may be instructed to perform the therapy at home, provided they do not over-treat and bruise the areas treated.

CONCLUSION:
As a result of repeated injuries affecting the sacral area and its attachments, adhesive scar tissue forms in the sacroiliac and other pelvic ligaments. Over time this weak scar tissue stretches and distends, making the low back more unstable so that repeated injury becomes more likely. Eliminating the pain producing scar tissue in the ligaments through the therapy in motion ligament technique is a very effective treatment for low back and sacral pain.

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Colic and Probable Ileocecal Valve Dysfunction in a 3 Year Old, Caused by Diet: A Case History

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ABSTRACT:
Objective is to share a case history of an Ileocecal valve syndrome in a pediatric case and its ability to lead to unnecessary steroid utilization for colicky infant. Clincally it is challenging to diagnose the cause of colic instead symptoms are treated. Over the years several patients have presented with conditions that are unexplained by conventional laboratory testing, analysis, and standard medical examination procedures, leaving the pediatrician and other clinicians in mystery and the parents frustrated. Applied kinesiology examination and procedures augment and clarify these cases and may make diagnosis fruitful, allowing the clinician to take appropriate action and assist the body in healing. Thus assisting patients in healing who may have lost hope. Ileocecal valve dysfunction should be ruled out in all patients presenting with mystery and routine illness.

Key Indexing Terms: Chiropractic, Applied Kinesiology, Herbs, Manual Muscle Text, MMT, Nutrition, Physiological Phenomena, Functional Medicine, Large Intestine, Colon, Ileocecal Valve, Colic, Pediatrics

INTRODUCTION:
The digestive tract contains several functional valves; These include Iliocecal, Cecal colic, Valve of Houston, Cardiac sphincter, Lower esophageal sphincter, and anus. Anatomic knowledge has dominated clinical practice at a cost of ignoring possible functions of these structures. More commonly clinicians mainly look for anatomic pathology. Only those trained to understand that functional illness precedes poor function and then leads to pathology actually look for it. The presentations that are considered significant are only those relating to the stomach with little acknowledgement of those in the large bowel except for cancer and inflammatory bowel conditions. In clinical practice more attention must be paid to the abnormal physiology of a structure as it relates to history and presentation. The ileocecal valve is such a structure. Very little attention is paid to it during a clinician's education of any discipline and training and connection to its relationship to patient presentation fails to be made many times due to its' remoteness. The incidence and number of possible disorders relating to valve dysfunction and reported anecdotally are too numerous to list but in clinical practice include, various types of inflammatory conditions, flu like symptoms, exhaustion, bursitis, sinusitis, and others.

Jargon relating to Ileocecal valve.
The Ileocecal valve also abbreviated "ICV", is located at the junction of the ileum and cecum. As it has been demonstrated to be a functional valve it opens and closes. "Open" means the opening is dilated. And "closed" means the orifice is approximated or contracted so nothing can pass through. However normal functions may occur inappropriately and create symptoms. Manipulation of the valve involves opening or closing it manually. "Meridian therapy" is the stimulation of acupuncture points that alter function and energy in energetic pathways called "meridians." Nutritional support would be those supplements given to assist structural corrections. "Diet modification" means changes made to patients' diets. "TFL" is short for the Tensor Facia Lata a muscle which originates between the ASIS and the middle and lateral aspect of the external surface of the iliac crest and attached on the lateral thigh on the Iliotibial band (IT band) a thickening of the fascia lata. "TS Line" Stands for Tempero-Sphenoidal line, a mostly diagnostic palpatory line located bilaterally on the skull near the temporal and sphenoidal areas. The clinical palpates this line for nodules that correspond with muscle and possible organ imbalance.

Case report
A 3 year old Caucasian female presented to the office with acute colic.
The child would simply experience crying spells especially at night. This child had been worked up by a pediatrician who in the parents mind had not offered a viable solution.

Using a standard examination, appendicitis an unlikely problem in an infant was ruled out. AK examination was limited as muscle testing of the child was not viable due to her age. Therefore the challenge and wait method was used which involved rendering a treatment and then following up several a few days later. The history revealed that the parent was feeding the child food from 6-months on produced by a device call "the baby bullet." This is a device that takes any food and processes it into baby food. Lumbar and thoraco-lumbar subluxations where noted.

It was postulated that the valve was open, and then it was therapeutically was held opened for 10 seconds. The parent was instructed to either breast feed, or feed the child food pre-chewed by the parent, and to cease giving the child table food- even it is pureed by the baby bullet.

Telephone follow-up was performed 1 week after. The parent reported no further symptoms from the child immediately after leaving the office and none since that time.

DISCUSSION:
There are many different spin offs of Standard Applied Kinesiology Management of an ileocecal valve syndrome. In this case our management did not consist of following standards set by the ICAK per Walther's Applied Kinesiology Synopsis. The standard indicator muscle, the right tensor fascia lata, could not be used nor could the reflexes.

While the ileocecal valve does not always give symptomatic pain at the anatomic location of the valve it must be differentiated from other conditions which would refer pain into the region around McBurney's point. In the case of a pediatric patient these include appendicitis (which is unlikely in infants), inguinal hernia, and gastritis. Furthermore, a rather challenging differential diagnosis exists with a variety of problems that mimic valve dysfunction due to their remote, diffuse, or migratory nature including, shoulder pain, bursitis, flu symptoms, fever or unknown origin, bowel movement appearance irregularities, small stool strands, balls, dark circles around eyes, croup, migratory gas pains, and a generally grumpy baby. These problems must be considered and valve dysfunction should be ruled out after a search for pathology is fruitless. However, AK methods should be used first prior to more aggressive care being performed, equally worse no care is rendered at all. The work-up should have included an evaluation by an applied kinesiologist or an appropriate referral to one. Having an early examination for ileocecal valve involvement is a practical approach.

CONCLUSION:
The ileocecal valve syndrome represents a condition that has a broad and significant impact on a wide array of human biological functions. Clinicians must add standard management of this condition to their armamentarium after having appropriately ruled out more dangerous conditions that may have a similar presentation.

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The 7 Fold (Level) Power Dilemma

Ilya Skolnikoff, D.C.

"All our thoughts, regardless of their content, first enter our systems as energy. Those that carry emotional, mental, psychological, or spiritual energy produce biological responses that are then stored in our cellular memory. In this way our biographies are woven into our biological systems, gradually, slowly, every day."

-Caroline Myss, PH.D., Anatomy of the Spirit

ABSTRACT:
The phenomenon of "The 7 Fold Power Dilemma" is identified. The 7 Fold Power Dilemma is related directly to Psychological Reversal, Umbilical Reversal, the 7 chakras, and affirmations coming from Louise Hay. The 7 Fold Power Dilemma is validated and its application using Applied Kinesiology procedures is discussed. NET from Scott Walker proves to be valuable for helping to correct The 7 Fold Power Dilemma. Relationships between chakras, 7 musical notes, homeopathic nosodes, bones, confluences, colors, thoughts and emotions are charted, examined and discussed. By using this technique, subconscious findings are brought up to the patient's conscious mind, allowing them to take a greater role in their own healing.

The constantly changing nature of chakras and meridians is discussed. The differences between findings in healthy spines versus unhealthy spines are also examined.

INTRODUCTION:
"The 7 Fold Power Dilemma" technique recognizes and addresses Psychological Reversal and power drainages in each of the 7 chakras. Utilizing this technique, Psychological Reversal, Umbilical Reversal and other emotional disruption to the human psyche are addressed.

The information presented in this article was gathered from several hundred patients over the course of 4 years. While this method is not a silver bullet for correcting the 7 Fold Power Dilemma, it does present a number of methods for improving upon the condition and allowing for greater patient compliance, progress, and clinical results as it aids in bringing these subconscious findings up to the conscious mind of the patient. This aids the patient in taking on a greater role in their own healing and treatment.

Further work needs to be done in order to increase the efficiency and results of the technique. The 7 Fold Power Dilemma is most commonly found in chronically ill patients but may present in anyone. The chakra correlations given should not be considered set in stone (static), but they should be considered constantly changing (dynamic), similar to the way in which blood, lymph, nerve impulses, hormones and CSF travel through the body. Chakras "flow" and move in a vibrating spiraling motion and are not static. The correlations between chakras, Dr. Francis' homeopathic nosodes, colors, notes of a scale and nutrition may also be considered to fluctuate and change in a similar way.

The chakra system originated in India many thousands of years ago. This system delineates 7 different energy centers that are both in the body and that surround the body. Each of these energy centers (chakras) corresponds to a particular color, musical note, element, organ and/or gland, bone(s) in the spine, etc… Dr. Timothy Francis' paper, The Holographic Spine organizes and correlates the different chakras to different parts of the spine and different colors, etc. This can be associated with muscle testing and Applied Kinesiology methodologies and protocols.

"Psychological Reversal" refers to the reversals that Roger Callahan, PhD introduced in his paper "Psychological Reversal."

Louise Hay has presented a variety of "affirmations" which are correlated with a variety of pathologies. These "affirmations" are similar to "Psychological Reversals" which Roger Callahan discusses. In fact, repeating specific "affirmations" 5 times daily for 21 consecutive days helps to reverse reversals.

Caroline Myss, Christopher Hills and others have discussed the relationship between the 7 different chakras and the Human Psyche and religion.

The 7 Fold Power Dilemma is a system by which imbalances in all of the chakras may be addressed simultaneously or individually using manual muscle testing techniques and Applied Kinesiology basic procedures.

DISCUSSION:
In his paper, The Holographic Spine, Dr. Francis points out that the following correlations can be made: CO = Red, C1 = Orange, C2 = Yellow, C3 = Green, C4 = Blue, C5 = Indigo, C6 = Violet, C7 = Red, T1 = Orange, etc..

N.E.T., developed by Dr. Scott Walker, proves immensely helpful in combination with the 7 Fold Power Dilemma technique.

I certainly agree that the color correlations with vertebrae described in Dr. Timothy Francis' "The Holographic Spine" are accurate in the healthy spine. However, I have discerned that in an unhealthy spine with chronic fixations and intraosseus subluxations, the colors and chakras can become distorted as are the vertebrae (fig1). Sometimes C-7 may correspond to Orange if a fixation or other physical (or energetic) distortion is present. C-6 may relate to Red, the first chakra, if there is an upper limbic fixation or a fixation between C-6, C-7, T1 and the first rib. *Therefore, any vertebrae may relate to any chakra.* However, the level of distortion is directly related to the structural, chemical, emotional, electromagnetic, spiritual or other imbalance. We will mainly be focused on the emotional imbalances that have caused structural lesions (subluxations). Additionally, we will make the following assumptions: red corresponds to the 1st chakra, orange corresponds to the 2nd chakra, yellow corresponds to the 3rd chakra, green corresponds to the 4th chakra, blue corresponds to the 5th chakra, indigo corresponds to the 6th chakra, violet corresponds to the 7th chakra. Each chakra corresponds to specific glands and/or organs. The 1st chakra we will correlate to the physical body as a whole (especially severe chronic pain), the coccyx, anus (rectum), legs, feet, immune function and large intestine and to some extent the kidneys. The 2nd chakra we will correlate with the reproductive system (sexual organs), the testicles and ovaries and also the urinary bladder and kidneys, large intestine, appendix, (sacrum and ilium) innominate (pelvis) and hip area. The 3rd chakra we will correlate with the stomach, abdomen, small intestine, spleen, pancreas, adrenal glands, kidneys, approximately T2-L3, liver and gall bladder. The 4th chakra correlates with the heart, arteries and veins, lungs, shoulders, arms, ribs/breasts, diaphragm, Thymus gland, liver and gallbladder. The 5th chakra relates to the throat, lungs, thyroid, trachea, neck vertebrae, mouth, teeth and gums, esophagus, parathyroid and hypothalamus. The 6th chakra relates to the brain, nervous system, face, nose, eyes, ears, pituitary gland and the pineal gland. The 7th chakra relates to the whole being of a person –it also relates to the brain (mind) and all of the other chakras as well as the skeletal system, skin and muscular system. Notice that the relationships mentioned here are far more general than in either of Dr. Francis' mentioned papers or most other AK publications. I contend that these generalities are viable as my clinical practice has revealed that just about any chakra can relate to just about any bone. Additionally, while these loose associations may be more common in sickly patients than in healthy ones, the generality of the relationships is still important to note. Someone who suffers lots of digestive difficulties who has lots of small intestine and heart difficulties might have the 3rd chakra (Stomach) be related to many of their difficulties. 80% of digestion takes place in the stomach and the stomach and heart are both organs that are deeply affected by emotional imbalances. To repeat, these general relationships between chakras, vertebrae, and

glands and organs are valuable with great clinical relevance. This is not to say that attaching particular chakras to particular vertebrae is not also valid and clinically powerful - it is simply a different approach. The chakras are "energy centers" that actually vibrate and surround the body. They are not stagnant, they are dynamic and moving. They have certain geometric shapes that may be related to them. Christopher Hills writes in his book Nuclear Evolution, "The two levels of the imagination (violet) and the acquisitive drive (green) do not appear in some typologies as separate types of behavior because they overlap in complex patterns. By psychological methods it would be almost impossible to identify them as separate functions, from the inner space time world of each individual." There are 24 main vertebrae in the axial spine but only 7 chakras. These chakras have a great deal to do with our life's purpose and the way in which we fit into the world. As one might imagine, there are numerous other correlations that can be made between the chakras and meridians and nutrients and herbs and homeopathy, etc. The 7 confluences which Dr. Francis describes in his work: "The Divergent Meridians and Miasmatic Nosodes," should also be considered as dynamic rather than static. These confluences constantly change according to the needs of the body. They connect to the 14 main classical meridians. According to Maciocia (p.355), "the extraordinary vessels can both absorb energy from the main channels and transfer energy to them when needed. This happens in cases of shock, for example." Maciocia uses the word "shock," whereas I use the term "power drainage" in a similar, but more general and non-specific way.

Stemming from the work of Louise Hayes, Carolyn Myss, Dr. John Diamond and Roger Callahan, I have found that the chakras can be related to particular Psychological Reversals. These Psychological Reversals (from Callahan) are very similar to Affirmations (from Louise Hayes). What follows are the 7 separate "affirmations" or "reversals" as they relate to the 7 different chakra energy centers. Clinically, the health care provider may have their patient think of each of these things and then test a strong indicator muscle for weakening. If the strong indicator muscle weakens, this shows the need for the 7 Fold Power Dilemma therapy. There may be as few as 1 or as many as 7 chakra's involved.

The power you have where you live and sleep = 1st chakra

The power you have when it comes to your close friends and family and people you love and care about the most = 2nd chakra

The power you have over your health – your ability to be healthy = 3rd chakra

The power you have when it comes to love, sex and intimacy = 4th chakra

The power you have to communicate how you feel with people you love and care about the most, especially your deepest emotions = 5th chakra

Your ability to organize your thoughts and think clearly and remember things and concentrate = 6th chakra

Think about your spiritual and/or religious life (Godly love)– whichever pertains to you = 7th chakra

Dr. Francis correlates specific Divergent Meridians with specific nosodes and specific ribs as well. He relates the 1st rib to the 1st confluence (Kidney/Bladder). He relates the second rib to the 2nd confluence (Spleen/Stomach). He relates the 3rd rib to the 3rd confluence (Liver/Gallbladder). He relates the 4th rib to the 4th confluence (Heart/Small Intestine). He relates the 5th rib to the 5th confluence (Lung/Large Intestine). He relates the 6th rib to the 6th confluence (Pericardium/Tripple Heater). He relates the 7th rib to the 7th confluence (Conception Vessel/Governing Vessel). You can see some additions that I made to Dr. Francis' correlations in Fig. 3. These correlations are not set in stone but are simply general guidlines.

I more commonly find these correlations of Figure 3 in the "healthy" spine. The spines of most of my patients are unhealthy. Additionally, I have found that the associated spondylogenic cervical vertebrae also relate to these same confluences.

I have correlated that if you go one vertebra below each of the adjacent vertebrae that are connected to the ribs, you can find a related confluence as well. However, this is particularly true of the spine that contains subluxations and NOT in the healthy spine which contains none (figs. 1 & 2). When we come to T1 and C7, a transitional segmental area of the spine, we are able to observe a number of different interesting phenomenon. At the T1 vertebrae we find the relationship to Orange, the relationship to the 2nd chakra and the relationship to the Spine and the relationship to the 1st confluence and the relationship to the indicated chakra organs which are the reproductive system, the testicles and ovaries and also the urinary bladder and kidneys. Therefore, in the "unhealthy" spine we can correlate the 1st rib to both the 1st confluence and the T1 vertebrae to the 2nd confluence as well. This may or may not apply to the healthy spine. It is likely that this is due to an existing upper limbic fixation at C7, 1st rib, and T1 and possibly a number of other connecting spinal vertebrae fixations. I have witnessed a few patients with a fixation between C5 and T3 (all 5 vertebrae are fixated). These patients always present with the 7 Fold Power Dilemma.

Most of these correlations have been related to unhealthy spines. More research needs to be done in this regard (to compare to healthy spines). It should be assumed that in the healthy spine, C7 would correspond mainly to the 1st chakra and mainly only to the 1st confluence. Perhaps, we see variation in the unhealthy spine not just due to the presence of a Limbic fixation but also because all of the confluences begin and/or end on the neck. Inferiorly, C7 is the beginning and/or the end of the neck. Let's then review the most common correlations made in the "unhealthy" spine. The T7 vertebrae is correlated with the 7th chakra and the 7th confluence. The T6 vertebrae is being correlated with the 6th chakra and the 6th confluence. The T5 vertebrae is being correlated with the 5th chakra and the 5th confluence. The T4 vertebrae is being correlated with the 4th chakra and the 4th confluence. The T3 vertebra is being correlated with the 3rd chakra and the 3rd confluence. The T2 and also the T1 vertebrae are both being correlated with the 2nd chakra and 1st chakra as well as the 1st and 2nd confluences which is likely due to a limbic fixation. The C7 vertebra is being correlated with the 7th chakra and the 7th confluence. These correlations are generalities being made in order to reveal the most commonly found relationships between the vertebra and chakras in the unhealthy spine.

There are a variety of approaches that can be used to treat the 7 Fold Power Dilemma. Using Neuro Emotional Technique basic procedures, have the patient repeat each of the statements for each of the chakras (or simply think one of the 7 thoughts). When a strong indicator muscle weakens, you can have the patient put a hand on their forehead in order to restrengthen the weakened muscle. This gives an entryway into the standard NET approach. You may continue with "There are only three things in life: love, money and you. When it comes to love there is family love, romantic love, and Godly love…..etc. Not every patient will be weak when thinking about their power role in all seven of the different areas. Sometimes only 6 of the different power roles will weaken. Sometimes only 5 of the power roles will weaken. However, in the vast majority of cases all 7 will weaken. The chakras that are especially susceptible to power drainages are the first five or six chakras. People who meditate a lot or do some sort of spiritual work may have their seventh chakra fairly well balanced. Because time is money in the office, it might be worth while to isolate which chakra is the MOST deficient and then focus on that chakra. Of course, this chakra will also correspond directly with the most deficient meridian that can be diagnosed using basic Applied Kinesiology or NET procedures. Callahan's method for clearing Psychological Reversal may be used by tapping the beginning and end point of the meridian that relates to the particular chakra. Or, the vertebral or rib head subluxation that relates to the most imbalanced chakra may be adjusted.

Biochemically, patients always seem to respond well to heart related nutrients and/or Crataegus Oxyacantha homeopathic remedy (rarely they may respond well to a Digitalis homeopathic preparation at 30c, 200c, 1M or 10M). Interestingly, I have yet to find a patient that would not respond to some potency of Crataegus Oxyacantha. Most commonly, Crataegus Oxyacantha 30C seems to resonate with the majority of my patients. However, it could be any potency of Crataegus Oxyacantha.

The last step of the therapeutic procedure is to have the patient think of each of the 7 thoughts as you test a strong indicator muscle. The strong indicator muscle should not weaken. However, if the patient is experiencing an "all yin response" due to the effectiveness of the treatment, then all muscles will test weak.

By no means do I mean to claim that this is a "fix everything" therapy. However, because you go a great deal deeper by bringing up the reversal and emotion related to the specific chakra, you are able to bring about a greater level of healing faster. Additionally, as previously mentioned, the practitioner is bringing subconscious psychic phenomenon up to the conscious mind.

Additionally, if it seems appropriate to the practitioner, affirmations that relate to each of the different meridians may be prescribed to the patient to further assist with the healing of this power drainage. Some of these affirmations may be found in Louise Hayes' book "You can Heal Your Life" or in other publications by Louise Hayes. However, this is a separate technique and might be best suited for another paper. An example of an excellent affirmation for the 3rd chakra is: "I give and receive forgiveness as my heart softens with love, this love then ensures all my needs are met." These types of affirmations are similar to mantras. However, they are specific to the meridian imbalance. They must be said out loud five times per day for no less than 21 days in a row in order to be effective. These types of affirmations are particularly good for patients who have used a great deal of drugs in the past or are on antidepressants. It is best for the person to say the affirmation either while looking in a mirror or while in nature (however, this is not absolutely necessary).

CONCLUSION:

Any chakra may relate to any bone, gland or organ in the body. While there may be more common associations between specific glands, organs, other structures and chakras, any association may exist due to the dynamic nature of the chakras. In the unhealthy spine, the associations between chakras and bones and muscles and confluences are even more general (unbalanced) while in the healthy spine these associations are more specific (balanced).

Nearly any confluence may relate to nearly any bone, joint, or other structure. Unlike the chakras, the confluences do not actually move around and change location. However, the appropriation of Qi from the confluences to the classical meridians or one confluence to another is constantly changing and this suggests a sort of a "movement" of energy. It is appropriate to think of the confluences as "dynamic" rather than static in spite of their definite pathways found within the body. For example, the lung divergent channel connects to GB22, ST12 and LI18. The Stomach Divergent Channel connects to BL1. The Spleen Divergent Meridian also connects to BL1 and travels through the heart organ. The Small Intestine Divergent Meridian connects to both the gallbladder and the bladder. Everything is connected to everything else.

While the interconnectedness and interrelationships of the meridians and chakras discussed here are valid, it is still helpful to think of common relationships between chakras, bones, muscles, meridians and emotions and chemistry in order to make clinical work simpler and easier to execute.

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Fig. 1: Unhealthy Spine—commonly found correlations

Rib	Vertebrae	Chakra	Confluence	Color
	C5	3rd 5th, 7th, 6th	2nd 6th, 5th, 7th	Indigo Violet Yellow, Blue
	C6	6th, 5th	6th	Blue Indigo
	C7	2nd, 7th, 1st 3rd, 4th	6th, 3rd, 7th, 5th, 1st	Violet, Red or Orange yellow
1st	T1	2nd, 7th, 3rd, 1st	1st & 2nd & 7th & 5th	Violet, Red Orange, yellow
2nd	T2	1st and 2nd	1st & 2nd & 5th & 6th & 4th & 3rd	Yellow Green Red
3rd	T3	3rd	2nd & 5th & 3rd	Yellow Blue, Green
4th	T4	4th	3rd & 4th	Red Green

Fig. 2: Healthy Spine—commonly found correlations

Rib	Vertebrae	Chakra	Confluence	Color
	C5	5 & 6 & 3	2nd 6th	Indigo
	C6	7th	7th	Violet
	C7	1st, 2nd	5th	Red
1st	T1	2nd	1st	Orange
2nd	T2	3rd & 4th	3rd & 2nd	Yellow, Green
3rd	T3	4th	3rd & 4th	Green
4th	T4	5th & 6th 4th	6th 4th	Indigo, Blue Green

Figure 3: Chakra/Element Therapy Guide*

Paired Meridians used only for identification	Confluence	Element	Chakra	Colors	Francis Homeopathic Nosode Correlations
KI / BL	1st	Water	2	Orange	Tuberculinum Bovinum
SP / ST	2nd	Earth	3	Yellow	Medhorrhinum
GB / LR	3rd	Wood	4	Green	Carcinosin
HT / SI	4th	Fire	4	Green	Psorinum
LU / LI	5th	Metal	1	Red	Syphilinum
TH / CX	6th	Fire	5 & 6	Indigo & Blue	Vaccininum (Vaccinoto Hellos)
GV / CV	7th	Yin & Yang—lines which make up 5 Element pentagram	7	Violet	Scirrhinum

*Please note that the Paired Meridians do not have any clinical application other than for reference. These represent confluences which are different than the classical meridians. The 7th confluence was correlated by Dr. Francis and is unknown in Traditional Chinese Medicine.

The Muscle Test

Ilya Skolnikoff, D.C.

"Until thought is linked with purpose there is no intelligent accomplishment. With the majority the bark of thought is allowed to 'drift' upon the ocean of life. Aimlessness is a vice, and such drifting must not continue for him who would steer clear of catastrophe and destruction."

-James Allen, As a Man Thinketh

ABSTRACT:
The parameters of muscle testing are examined. The different types of muscle tests are explored. The influence of thoughts, feelings and emotions on muscle testing is examined. Particular attention is given to the AK approach and how thoughts affect the effectiveness of this approach. It is concluded that what the AK practitioner is thinking about while doing their muscle testing is of utmost importance.

INTRODUCTION:
In order to be a good AK doctor we need to be good at muscle testing. It is possible to be a good muscle tester and yet get poor results with our muscle testing if we are unfocused or distracted when doing out muscle testing.

Thoughts are things. If we have mixed thoughts while doing our muscle tests then we will get mixed results from the muscle test.

After being in practice for several years as an Applied Kinesiologist, I began to notice some things that could not be easily explained with regards to muscle testing. At some points during a treatment I would find muscles strong that at another point in the same treatment would be weak without any intervention having caused the change. Additionally, the patient was not switched, had not changed their thoughts, or changed any of the other parameters of the muscle test. I had to look at two variables: "I" was the first variable and "my patient" was the second. I have noticed that occasionally there are patients who are difficult to muscle test because they will not push their limb into my hand. However, with the "thoughts are things" phenomena that I am describing, this was not the case.

In this paper I will discuss how our thoughts affect our muscle testing.

DISCUSSION:
There are two main types of muscle testing that we consider in Applied Kinesiology. There is the "patient induced" muscle testing and the "doctor induced" muscle testing. We refer to the doctor induced muscle testing as a gamma I (G1) test and the patient induced muscle testing as a gamma II (G2) test (after Schmitt). Schmitt has referred to a third type of muscle testing during which the patient and doctor begin the muscle test at the same time. The doctor-induced muscle testing is the most common type of muscle testing in AK. The doctor induced muscle testing is less accurate but more widely used. The G1 type of testing doesn't simulate real life experience as people do not generally have things pushing up against them in their usual activities such as walking and bending. Humans usually propel themselves through the world without any resistance other than constant gravity. In this paper we will primarily deal with the G2 muscle test.

What I found was that "my thoughts" and "my intentions" would change the muscle test. This would happen when I would block a patient in category III. As soon as I put the patient on the blocks in category III, the bilaterally weak hamstrings should get strong when tested together. What I found was that frequently the bilaterally weak

hamstrings would be weak when the patient had been placed on the blocks. Often, I was not focusing on whether the bilateral hamstrings muscle test would be weak or strong, I was simply putting the patient on the blocks and then I would perform the muscle test. I had a lack of focus and a lack of intent that had created less than optimal results with my muscle testing. Because I did not know what to expect, or I may have even expected weak hamstrings, this is exactly what I got: weak hamstrings. (See figure 1.)

We could think about this from a variety of perspectives. When people view electrons they change their movement through space. An analogy would be that of electrons changing their movement dramatically when being viewed. The flow of electrons in a particular medium is completely different if that medium is watched by a human. As with electrons, we, as humans, affect our environment whether we realize it or not. We should be careful about what our intentions are when we perform muscle testing.

To reiterate, Applied Kinesiology is only as effective as the practitioner's muscle testing skills. John Thie, D.C. would often teach ways of strengthening or weakening muscles using energy medicine. He demonstrated that a muscle could be weakened by tracing any meridian backwards in one's mind. Furthermore, if you were to imagine tracing a meridian forwards, you would strengthen any muscle in the body (injuries excluded). The implications of Dr. Thie's work have not yet been realized.

One of the more popular new age videos in the last 4 years is called "The Secret." This video discusses how the world that we are surrounded by is a product of our thoughts. Every thought we have dramatically influences not just our life but the lives of those around us as well as inanimate objects. One of the great "secrets" of life is to be careful about what we are thinking and feeling.

This has implications in the clinical environment. If we are negative, then our patients will not want to spend time with us. If we are upbeat our patients will also be upbeat. If we believe our patients will heal, they are more likely to heal. Our thoughts and feelings have a strong influence on our patients. If we "think" that a muscle will be strong – it may actually become strong. If we think that a muscle will be weak, then it may actually become weak. It is important to be careful of what we are thinking and have our minds be focused on positive outcomes regarding the results of our muscle tests. Our intent should be pure.

The muscle test is the cornerstone of the Applied Kinesiologist. To repeat, Applied Kinesiology is only as good as the Applied Kinesiologist who uses Applied Kinesiology is good at muscle testing. While this is well known among nearly all Applied Kinesiologists, what is less commonly considered are the thoughts, feelings and emotions of the Applied Kinesiologist and how these thoughts, feelings, emotions and beliefs affect the outcome of the muscle test. For example, if we are certain that a muscle is weak, then it BECOMES weak. If we are certain a muscle is strong then it might BECOME strong. This is relevant. This is important. This should be considered and it should be discussed among Applied Kinesiologists. Of course, if we go into the muscle testing process with skill and yet blind to what our thoughts, feelings, emotions and intentions are then we are likely to get poor results from our muscle test. Again, the outcome of this scenario is an AK doctor who is far more of a "quack" than a real doctor.

The way to prevent our thoughts, feelings, emotions and beliefs from getting in the way of the muscle test is to always have an open mind as to the outcome of the muscle test and to seek to get information from the muscle test rather than to prove something. All well trained Applied Kinesiologists realize that the muscle test is amazing and can bring about huge, dramatic positive changes in the health of our patients. Contrarily, without a clear head and the proper intentions, the muscle test really has very little clinical value.

The effectiveness and results produced by the muscle tests will always be reflected in the doctor who has worked on themselves by seeking to help their patients, keep an open mind, and always be open to new ways of thinking

and new ideas. The quality and fullness of our personal lives may often shine through in our muscle testing. If we are angry, upset or unhappy, it will show through negatively in our muscle tests. If we are joyous, calm and happy, this will show through positively in our muscle testing.

It is the doctor who thinks that they can help their diabetic patient no longer be diabetic in only 6 visits that actually can. The doctor who does not think that they can help their diabetic patient be free of diabetes will not be able to help their diabetic patient heal from diabetes. The "thinking" of the doctor makes all the difference. Skill and talent are crucial. However, philosophy, thoughts, feelings, beliefs and attitudes are just as important. Einstein said, "imagination is more important than knowledge." This may seem obvious, but it is the essence of effective muscle testing that brings about dramatic results in the clinical environment.

CONCLUSION:

Thoughts, feelings, beliefs and attitudes affect the outcome of the muscle test. Our intentions also affect the outcome of the muscle test. Thoughts are things. Our thoughts affect the world around us, our relationships, and every aspect of our lives. Again, we see the results of our thought in our relationships, our financial situation, our love life, and our muscle testing and clinical results as well.

This is an important aspect of muscle testing: our thoughts.

The best approach to dealing with this aspect of the muscle test is to first become aware that it exists. Muscles are not just structural. Muscles have a "soul." Muscles also have a spirit and they are connected to nerves that are connected to the spinal cord that is connected to the brain. Due to these specific inter-relationships, how could it be possible that muscle testing would not be affected by thoughts and feelings when touch is involved in the process of the muscle test? As AK doctors, we already know about the power of therapy localization. We also need to come to terms with the power of thought, and its affect on the muscle test. It is the neurons found in the muscles that are being tested when we perform a muscle test. Neurons are nerves; the Central Nervous System is made of nerves, and our thoughts coming from the brain are nerve generated as well. They all affect each other and are all inter-related. This cannot be ignored.

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Figure 1. Muscle Test Acuracy with or without Clear Intent

Muscle Tests	**Intent**	**Accuracy***
G1 Doctor Induced	Unclear	Low
G2 Patient Induced	Unclear	High
Dr. & Patient Simultaneous	Unclear	Low
G1 Doctor Induced	Clear	Medium
G2 Patient Induced	Clear	Very High
Dr. & Patient Simultaneous	Clear	Low

* Accuracy measurement scale consists of Low, Medium, High and Very High.

Division II

Critical Review

Category I as a Symptom of Hyperinsulinism and/or Dysfunction of the Tonic Labyrinthine Reflex: A Theory of Idiopathic Scoliosis Origins

Philip Cameron, D.C.

ABSTRACT:
The category I pelvic dysfunction (CAT I) is a structural dysfunction described by Dr. Walther in the Applied Kinesiology Synopsis 2nd Edition as "torsion of the pelvis without osseous misalignment at the sacroiliac articulations". This paper proposes that the CAT I is actually a symptom of hyperinsulinism and/or dysfunction of the tonic labyrinthine reflex (TLR). This paper also proposes the above to be a possible theory for the origin of idiopathic scoliosis.

Key Indexing Terms: Category I, Hyperinsulin, Hyperinsulinism, Tonic Labyrinthine Reflex, Idiopathic Scoliosis

INTRODUCTION:
When CAT I is found during assessment, the known treatment has been to address the structural and muscular imbalances. However, after correction many times the CAT I will return, especially after the patient has been ambulatory. This paper poses an answer to the question of why a CAT I returns after a patient engages in walking or normal activity. This paper proposes the CAT I is actually a symptom of gait imbalance caused by hyperinsulinism and/or dysfunction of the TLR and should be viewed as an indication of underlying physiological stress. This can guide the practitioner to treat the patient more appropriately. It can also serve as a benchmark when re-evaluating the patient on subsequent visits to determine if the patient is healing and realizing a higher level of health.

DISCUSSION:
While attending a Quintessential Applications A(K) clinical protocol course presented by Dr. Walter Schmitt, DC, DIBAK, DABCN, we were engaging in a discussion about gait patterns and their dysfunctions and corrections. I observed Dr. Schmitt illustrate how a gait pattern appears when a latissimus dorsi muscle was hypertonic and not allowing the arm to swing forward in a normal gait pattern. As he walked across the front of the room without letting his arm swing I observed that his pelvis would "twist" into a presentation similar to a CAT I. Our discussion was focused on the correction of gait imbalances associated with hyperinsulinism and gait imbalances associated with dysfunction of the TLR. This gave me the idea that there may be more to the CAT I then the structural fault.

I began evaluating patients that presented with CAT I for hyperinsulismism and abnormalities of the gait pattern associated with the TLR. It was universal that every patient who had a CAT I and the associated pain pattern at the first rib-head also had a gait dysfunction. Upon correction of the gait imbalance the CAT I and pain at the first rib-head were no long present.

This finding becomes significant because it provides a physical indicator of underlying hormonal and or sugar handling stress on the body. In our society we are continually seeing more hormonal and insulin related problems resulting from poor diets, high stress, and increased toxic load. Classically in Applied Kinesiology we have looked to muscle/organ correlations to indicate possible imbalances in physiology: the latissimus dorsi and the triceps relating to the pancreas, the sartorius and gracilis relating to the adrenal glands, and the teres minor relating to the thyroid. By using the CAT I as an indication of the underlying physiological disturbance we have a method to double check that the body has been cleared of the underlying stresses and balanced appropriately. In Dr. Schmitt and Dr. McCords QA Clinical Protocol, there is already a hierarchy in place to check for the hormones, the TLR, and hyperinsulin problems using weak muscles. Upon following the QA protocol, when reaching the point of

evaluating for a CAT I problem, it should not be present if the physician has evaluated and corrected sugar and hormonal imbalances previously. However, if the CAT I is still present this indicates there is underlying problems in the patient's physiology, and evaluating the patient for the gait imbalance will reveal what eluded the physician during the evaluation.

PROCEDURE:

The techniques to evaluate for a CAT I and gait imbalances due to hyperinsulinism and dysfunction of the TLR have previously been published, and are well documented in AK literature and papers. My purpose is to demonstrate that this classic AK finding is more complex than previously thought of as a "find and fix" problem. I will recount my evaluation method to help clarify the understanding of these principles. If you need instruction on these techniques, they can be found in the AK synopsis 2nd edition by Dr. Walther, and The Quintessential Applications AK Clinical Protocol by Dr. Schmitt and Dr. McCord.

1. Evaluate the patient using standard AK techniques for CAT I and its associated pain patterns.
2. If the CAT I is present, have the patient stand and begin evaluation for abnormal gait patterns using standard AK techniques. Evaluate for normal inhibition of the latissimus dorsi on the ipsilateral side of posterior gait, and inhibition of the pectoralis clavicular on the contralateral side.
3. If there is abnormal inhibiting pattern in the latissimus dorsi (it is in a hypertonic state), evaluate for a hyperinsulin pattern and correct and treat with neurolymphatic reflexes and proper supplementation, dietary and lifestyle changes.
4. If normal inhibition pattern is present have the patient rotate the head to the ipsilateral side of inhibitied latissimus dorsi and re-evaluate the latissimus dorsi to see if it facilitates due to normal firing of the TLR. If it does not facilitate begin evaluation to restore the TLR; this is most likely due to hypo endocrine function either in the adrenals or the thyroid, however all endocrine neurolymphatic reflexes should be checked. Correct the neurolymphatic reflexes that therapy localize, and make appropriate supplementation, dietary and lifestyle changes.
5. On a rare occasion I have found a CAT I, and the normal inhibition patterns and the normal TLR patterns have been present. It has been my observation that a weight bearing IRT pattern is present, which did not prohibit autogenic facilitation from facilitating an inhibited muscle. This is usually found either in the iliolumbar ligament or the sacrotuberous ligament. Find and correct the abnormal IRT pattern.
6. Recheck the patient for the presence of the CAT I, you will find it has resolved and the pain patterns associated with the CAT I have resolved as well.

CONCLUSION:

The CAT I, which is a standard part of AK evaluation and treatment, demonstrates to the physician that there is more in the underlying health of the patient. Using Applied Kinesiology and the known principles of muscle facilitation and inhibition, the physician can now have a method to double check that the patient has been treated more thoroughly. As the patient continues with their normal activities of daily living they will be progressing with a higher level of health instead of continuing to re-exacerbate there physical problems due to their underlying physiological stress.

At this time, I would like to propose a new hypothesis relating to the development of idiopathic scoliosis. If you observe a gait pattern with a hypertonic left latissimus dorsi, and the pelvic changes associated with it, you will see a CAT I presentation. Because muscles move bones, you will also see hypertonicitiy of the left lumbar paraspinal muscles, the muscles of the right thoracic spine compensate becoming hypertonic, and the cervical spine then has to compensate to bring the eyes back level to the horizon. This posture and hypertonic muscle presentation is the same as idiopathic scoliosis.

I have a strong suspicion that scoliosis may have its underlying beginnings from these physiological processes. All young adolescents I have seen with scoliosis have these abnormal gait presentations. I have not at this time seen a large enough population of adolescents with scoliosis, and have not been able to follow the patients I have seen for long-term case studies. However I believe that further evaluation and study on these principles could prove valuable in understanding the cause of idiopathic scoliosis. If proven correct, AK gait evaluations would enhance the standard screenings for idiopathic scoliosis leading to earlier detection, reduced incidence and decreased severity of idiopathic scoliosis.

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Case Report: Symptomatic Improvement in a 52 yr/old Male Complaining of Electromagnetic Field Hypersensitivity and Malabsorption Syndrome Using Applied Kinesiology Chiropractic Technique

Shaun Craig, D.C.

ABSTRACT:
Objective: To describe the Applied Kinesiologic evaluation and treatment of an unusual case of electromagnetic field (EMF) hypersensitivity, cognitive impairment, digestive disturbances and malabsorption syndrome. The theoretical pathophysiology of this case will be elaborated on.

Clinical Features: A 52 yr/old male with 12 year history of EMF hypersensitivity, cognitive impairment, poor memory, slurred speech, constipation, severe generalized pain, malabsorption syndrome, and generalized wasting with significant weight loss that began while living under a high voltage power line and working in a high tech industry. Exposure to Wi-Fi, cellular, electronics, and fluorescent lights would cause severe cognitive and speech impairment that rendered him unable to work. A medical diagnosis could not be established. Self treatment included moving away from the high voltage power line, dental amalgam removal (performed by biological dentist), ingestion of powdered plant proteins, magnesium citrate, 5 daily enemas was helpful. Ingestion of sweets was very aggravating to his digestion.

Intervention and Outcome: The patient's history, along with applied kinesiology examination, indicated nutritional treatment to the parotid glands and large intestine. Cranial therapy, retrograde lymphatic treatment, and manipulation of Houston's valve were also performed. Four treatments over twelve weeks resulted in a ten pound weight gain, formation of normal stools, discontinued use of enemas, improved elimination transit time from 2-4 hours to 24 hours, decreased EMF hypersensitivity, and improved cognition, memory and speech during EMF exposure which was verified by his partner.

Conclusion: This unusual case had a dramatically positive outcome utilizing simple AK diagnostic and therapeutic procedures. This case provides a therapeutic approach to a set of unusual symptoms that evades current standard medical diagnostic criteria.

Key Indexing Terms: Applied Kinesiology, Chiropractic, Nutrition, Malabsorption, Electromagnetic Field Hypersensitivity, Gastrointestinal Disease, Intestinal Dysbiosis, Parotid Gland, Dental Amalgam

INTRODUCTION:

The purpose of this manuscript is to present an unusual, complex, and interesting case that was treated with some success using Applied Kinesiology chiropractic methods. The topic of electromagnetic hypersensitivity is controversial in nature (1), largely because people are being exposed to increasing amounts and variety of electromagnetic radiation and no definitive evidence exists on health or disease outcomes. While the scientific community is attempting to determine whether the negative health effects perceived by some people due to electromagnetic radiation are "real" or "imagined", there is considerable difficulty studying health effects due to technological limitations, the complexity of human brains and consciousness, and the complexity of quantum electromagnetic interactions (2).

To fully understand the clinical context for this case, we need to understand some basic definitions in regards to electromagnetic energy. Classical electromagnetism refers to consequences of electromagnetic forces between charges and currents. After a century long effort to understand these forces, much has been learned about the interaction between electric charges and currents, and the electromagnetic field emitted by them. However, there

is still no physical understanding of the electromechanical systems, no generally accepted classical equation of motion for charged particles, and no pertinent experimental data (3). This complicates our understanding that electromagnetism has on biological systems.

In physics, an electric field surrounds electrically charged particles, and depicts the force exerted on other electrically charged objects. It is a vector field measured in volts per meter. It contains electrical energy with energy density proportional to the square of the field amplitude. Changes in the electrical field, influences the local magnetic field. The mixture of electrical and magnetic fields is referred to as electromagnetism.

Bioelectromagnetism refers to the electrical, magnetic, or electromagnetic fields produced by living cells, tissues and organisms. The electric current produced by action potentials, which flows in nerves and muscles, produces electrical and magnetic fields. Bioelectromagnetic fluctuations of voltage between parts of the cerebral cortex are detectable by electroencephalography (EEG) and are referred to as brainwaves by neurophysiologists.

External influences of electromagnetic fields on human behavior and physiology have been studied. A specific pulsed magnetic field originally designed for spectroscopic MRI was found to alleviate symptoms in bipolar patients, while a different MRI pulse had no effect (4). Other studies have shown that whole-body exposure to a pulsed magnetic field was found to alter standing balance and pain perception (5, 6).

Strong changing magnetic fields have been shown to induce electrical currents in the brain, referred to as transcranial magnetic stimulation (TMS). Selected parts of the brain can be induced to depolarize leading to changes in patterns of neural activation. This experimental technology is currently being attempted for use to replace electroconvulsive therapy (ECT) to treat severe depression. Very strong pulses at very rapid rates have induced currents that cause convulsions (7).

Recently, more and more studies are beginning to surface in attempting to determine external EMF influences on biology. In studying the influence of EMF exposure on sleep, sleep EEG and cognitive performance, Regel et al used varied signal intensity pulse modulated EMF (similar to cell phones) and found a dose dependent relationship between EMF field intensity and its effects on brain physiology as determined by changes in sleep EEG and cognitive performance (8). Ammari M, concluded that static magnetic field exposure altered emotional behaviors, created cognitive impairments and attentive disorders in rats (9).

Currently, most of the recently published studies on EMF exposure concerns cell phone use. Results of these studies have been mixed, creating controversy (1). Cell phone EMF exposure has shown in some studies to negatively effect cognition, reaction time, EEG measurements of brain oscillatory responses in children, learned spatial memory in mice, decreased Purkinje cell number in the cerebellum of mice, increased Corticosteron and Adrenocorticotropic hormones, and the hippocampal plasticity and depression in rats (1, 8, 10, 11, 12, 13). Some studies and review of literature find no negative health effects of cell phone exposure or other EMF exposure and attributes perceived effects to psychological factors (14, 15, 16, 17, 18). A few studies have criticized study methodology and lack of standardized protocols in bioelectromagnetic research (19), citing that the mobile phone industry funded, partly or wholly, 87% of the research (20), and that any interpretation of results from the studies should take sponsorship into account (21).

Concerning the case subject of this manuscript, the largest study performed observing cognitive and neurobiological alterations in electromagnetic hypersensitive patients (EHS) found genuine individual vulnerability in EMF exposure effects. Using TMS pulses in a blinded measurement protocol, aspects of rumination, symptom intolerance, vulnerability and self esteem specifically differentiated EHS patients from controls by measurement using standardized questionnaires and perception thresholds (22). Our case subject may be someone with an individual vulnerability to electromagnetic fields described in this study.

Our subject was also suffering from severe gastrointestinal dysfunction that occurred around the same time that he began noticing EHS and cognitive problems. As this author was not familiar with any approach to address the EHS symptoms specifically, attention to the digestive symptoms was priority. Applied kinesiologic evaluation of the digestive and endocrine system as described by George Goodheart, DC was the starting point for this case.

CASE REPORT:

A 52 year old man complained of a myriad of symptoms that baffled the medical community. His symptoms started 12 years ago when he was working in a high tech field and living under a high tension power line. He began having what he refers as electromagnetic stress or sensitivity, where WiFi, cellular phones, fluorescent lights and electronics would seem to affect him cognitively. EMF exposure would scramble his thoughts, give him short and long term memory problems, slurred speech and difficulty speaking, and prolonged exposure would "make him go crazy". This rendered him unable to work, and he lost his social and family life. He reported having difficulty recalling the details of his medical history because his memory was greatly affected.

During this time he developed severe constipation, for which prune juice was temporarily helpful, and then it lost its effectiveness. Metamucil was also temporarily helpful. His cognitive symptoms seemed to be much worse during these periods of constipation and he continued to decline. He began doing 5 enemas per day which significantly helped him systemically and cognitively and allowed him to void, which was highly discouraged by his primary care physician and gastrointestinal physicians. He reported that his food would be evacuated undigested in most cases. During this period of sickness he dropped to 140 lbs from 190 lbs, causing him to be 50 lbs underweight. He stated that he was eating large amounts of food but continued to lose weight unexpectedly. He began having severe generalized whole body pain. He stated that the medical authorities he was seeing were unable to diagnose him and he was "just waiting to die".

He began searching alternative health care options in an attempt to locate solutions for his health problems. He visited a periodontist for a dental infection that began after having a root canal procedure. The periodontist scraped the root out. He then went to a biological dentist to have his amalgam fillings removed which was immediately helpful for the whole body pain he was experiencing. He saw a nutritionist who placed him on a powdered plant protein by Standard Process which was helpful in maintaining his weight. Magnesium citrate was also helpful. He moved to a different location away from an overhead high voltage power line which was very helpful. He currently lives without television, radio, cellular or electronics in his home as these are aggravating. For the last few years he has been maintaining this lifestyle and has slowly been improving. He stated that ingestion of essential oils and the enemas keep him level. He reported that ingestion of sweets was extremely aggravating to his condition, which would also cause pain, dryness and cracking in his hands almost immediately after ingestion.

1st visit examination: Aside of being underweight, the patient appeared healthy. Applied kinesiology manual muscle testing was performed as described by George Goodheart. There was bilateral weakness of the pec major clavicular division, pec major sternal division, popliteus, latissimus dorsi, rectus femoris and tensor fascia was found that strengthened to therapy localization (TL) to its respective neurolymphatic reflex (NL). This was the stomach, liver, gallbladder, pancreas, small intestine and large intestine NL's respectively. Therapy localization to the parotid glands bilaterally weakened the gluteus medius bilaterally, which was a strong indicator muscle used in this case. Therapy localization to the parotid glands caused strengthening of the pectoralis major clavicular division, pectoralis major sternal division, popliteus, latissimus dorsi, rectus femoris and tensor fascia lata bilaterally. Aerobic testing in the lower extremity was performed by having the patient perform the actions of riding a bicycle for 30 seconds. This caused weakening of the gluteus medius bilaterally (previously strong indicator). This test was also negated by TL to the parotid glands (gluteus medius would remain strong). Retrograde positioning caused global muscle weakness of the upper extremities and was negated by TL over the thoracic duct. Sartorius, teres minor, supraspinatous, infraspinatous, and lower trapezius were strong bilaterally and unaffected by TL to its respective NL. This is the adrenal gland, thyroid gland, brain, thymus and spleen

neurolymphatic reflexes respectively. There was also negative TL to the pituitary NL. Deep cervical flexors and sternocliedomastoid was strong bilaterally and unaffected by respiratory challenge (held inspiration, expiration, half inspiration and half expiration). Repeated muscle activation patient induced on the gluteus medius was 15 repetitions plus (considered unremarkable).

1st visit treatment: Insalvation of Parotid Protomorphogen (Standard Process) caused strengthening of the pectoralis major clavicular and sternal divisions, popliteus, latissimus dorsi, rectus femoris and tensor fascia lata bilaterally. This also negated the positive aerobic test stated above. Pumping of the thoracic duct with lung excursion negated the global upper extremity muscle weakness found in the retrograde position. Parotid Protomorphogen was given to be chewed at a rate of one tablet per meal, and 5 tablets of RNA were given to be chewed for the first 5 meals. The patient is to follow up in three weeks.

2nd visit subjective: Patient reported a slow improvement. He reported improvement in his digestion. He gained ten pounds in the last three weeks which was beneficial because he is underweight.

2nd visit examination: There is negative TL to the parotid gland using gluteus medius as a strong indicator muscle. There is bilateral weakness of the rectus femoris, psoas, and tensor fascia lata that strengthens to TL to the frontal bone. There is weakness of the pec major sternal division bilaterally which strenghthens to TL to the liver NL. There is negative TL to the adrenal, thyroid and small intestine NL's. Insalvation of Total Mercury and Total Thallium (homeopathics by NutriWest) caused global weakening which is negated by Tuna Omega III oil (Standard Process).

2nd visit treatment: Sphenobasilar expiration assist cranial correction strengthens the rectus femoris, psoas and tensor fascia lata. Right temporal bulge and left parietal descent cranial corrections are performed directed by challenge to the cranium. Insalvation of AF Betafood (Standard Process) strengthens the pec major sternal division. This is given at a rate of 2 tablets to be chewed with meals. Follow up in one week.

3rd visit subjective: patient reports continued improvement. He continues to have digestive issues and difficulty with elimination. Due to the enemas, his elimination transit time is only 2-4 hours.

3rd visit examination: Rectus femoris, psoas, tensor fascia lata, and gluteus medius strong bilaterally. Positive TL to the large intestine NL weakens the tensor fascia lata. There is positive TL to the skin surface over the descending colon.

3rd visit treatment: Insalvation of Spore X (NutriWest) negates the positive TL to the large intestine NL. Correction of Houston's Valve (corrected by attempting to open the valve) is performed and negates the positive TL over the descending colon. Spore X is given at one pill before meals. Total Mercury, Total Thallium at 6 drops three times per day and Tuna Omega 3 one three times per day is given. The patient is to follow up in 2 weeks.

4th visit subjective: Patient reports that since his last treatment, for the first time in 12 years, he has been able to form proper stools without the use of enemas. He attributes this to the Spore X. He has not been able to take the Total Mercury or Total Thallium because they make him feel weird. A few days ago he had a mild collision with a side rail and experienced some mild jarring but no injury. He has been able to discontinue the use of enemas.

4th visit examination: There is negative TL to the NL's of pituitary, thymus, spleen, thyroid, adrenal, stomach, gallbladder and liver. There is positive TL to the NL's of the small intestine and large intestine. There is weakness of the supraspinatus bilaterally that strengthens to TL to brain NL.

4th visit treatment: Insalvation of Spore X negates positive TL to small and large intestine NL's and strengthens the supraspinatus bilaterally. Vigorous stimulation of the brain NL was performed. He will continue taking Spore X. Follow up in 6 weeks.

5th visit subjective: Patient continues to improve. He now has normal stool formation and normal elimination. His reaction to electromagnetic radiation has improved as well. He had an entire day where he did not react negatively to the use of a cell phone. He also started taking probiotics as a suppository which he feels has been helpful as well.

5th visit examination: Placing a cell phone on the anterior surface of the patient causes global muscular weakness. This only occurs from the diaphragm to the head. Below the diaphragm there is no effect with the exception of the plantar surface of the feet. Placing a cell phone on the dorsal surface of the patient causes global muscular weakness from the 8th dorsal vertebrae up to the head only, there is no reaction inferior to the 8th dorsal.

5th visit treatment: Correction for a hiatal hernia negates positive weakening to cell phone placement on the anterior surface of the patient. Correction of T7, T8 thoracic fixation negates the positive weakening to cell phone placement on the dorsal surface. Correction of a superior talus on the left negates weakening of cell phone placement to the plantar surface of the feet. This treatment is experimental in an effort to determine if this will improve the patient's tolerance to cellular EMF radiation. He will continue taking Spore X. The patient is to follow up in three weeks.

This patient has shown significant improvement in his digestive symptoms as a result of applied kinesiology examination and treatment. He also showed some mild improvement in his cognitive function while being in the vicinity of EMF radiation. This patient will be under continued treatment provided that he continues to report decreased EMF sensitivity. If he shows continued improvement in his ability to tolerate cellular phone EMF radiation after his last treatment, I may continue on the path of trying other provocative tests using other forms of EMF radiation such as florescent lights, electronics and WiFi against a strong muscle indicator in an attempt to desensitize this patient.

DISCUSSION:

Based on the patient's history, and the results of the applied kinesiological examination findings, an attempt will be made at a theory as to the cause of this patient's health problems.

The patient described being exposed to excessive amounts of electromagnetic radiation at both work and home. Most of the studies regarding EMF exposure look for physiological effects in short periods being minutes to hours, and patients are studied in a clinical environment. This patient described living underneath a high voltage power line, exposing him to radiation for many hours per day, which occurred over several years. He would then leave home and be exposed to additional EMF radiation at work (he was a computer programmer).

The patient reported a significant improvement in a whole body pain syndrome after having his dental amalgams removed. Dental amalgams usually consist of mercury, tin, silver, copper and other trace metals (23). These metals are significant electrical conductors, with silver and copper being the two strongest metal conductors known (25, 26). It is plausible that in this patient's case, that prolonged exposure to external electromagnetic fields caused an amplified electrical and magnetic field, and subsequent electrical current, to develop around the amalgam filling, similar to an antenna.

Adjacent to this patient's amalgam fillings are his parotid glands. Parotid glands are responsible for creating serous fluid to lubricate the food bolus for swallowing, but are also responsible for creating a bicarbonate buffer to neutralize stomach acid, and are responsible for producing alpha-amylase which begins the digestion of starches

and sugars (24). It's possible that the altered electromagnetic field surrounding the amalgam filling altered the formation of bicarbonate ion, sodium and potassium ions of the parotid gland, affecting the cellular communication and ph of the parotid gland tissue, ultimately affecting enzymatic formation and activity of alpha amylase, altering the patient's ability to properly digest starches and sugars. The patient reported exacerbation of his condition with the ingestion of sugars and starches. Applied kinesiological evaluation in his initial presentation indicated nutritional treatment to the parotid glands, which improved his digestion and helped him put on weight (10 pounds in 3 weeks).

If the patient's ability to properly digest starches and sugars is impaired, over time, these undigested starches will likely alter the ecological balance of the normal flora of the intestines. This may have created a local environment of unfriendly flora and yeast, creating not only local digestive dysfunction (constipation), but also a systemic toxic condition. This may explain why the patient's condition was improved by his excessive use of enemas, even at the expense of nutritional malabsorption. Applied kinesiological evaluation on his third and fourth visit indicated nutritional treatment to the small and large intestine, testing positively for Spore X. Spore X is a product that is formulated to normalize the gastrointestinal flora, with NutriWest's website catalog stating "a unique mixture of ingredients provides acidic support for an alkaline environment" (27). It contains bile acids shown alter microbial growth in the gut (28), and abnormal microbes have been implicated in chronic gastrointestinal disorders (29). This treatment normalized the patient's stool formation within days and allowed the patient to discontinue the use of enemas.

In terms of the patient's continued hypersensitivity to EMF radiation, although improved, continues with mild amounts of EMF intensity. This may be due to his individual genetic susceptibility, or his conscious and subconscious nervous system being "tuned-in" to a potential past environmental threat. I am hopeful that an experimental attempt at desensitizing the patient to these perceived threats using Applied Kinesiology, chiropractic and nutrition will continue to be of value to him symptomatically, providing him with improved quality of life.

CONCLUSION:

Because of the lack of conclusive research in EMF hypersensitivity, no firm conclusions can be drawn from this case. It is difficult to determine if this patient's cognitive and speech symptoms are sincerely related to EMF or if it's psychologically driven. However, the patient perceives a significant benefit from an applied kinesiological holistic approach. Hopefully this study can be of benefit to other patient's who are struggling with a similar condition, and be of benefit to other health care providers. Maybe it will spawn continued interest and research in EMF and biological systems.

The ability to link dysfunctions and symptoms that on the surface appear unrelated and remote, but have a common denominator, can often be found using AK MMT. This case in particular appears to have linked EMF hypersensitivity with digestive symptoms, which may be unique to this specific case. This case may serve as a reminder to practitioners who use AK, that the body, the mind, and chemistry are interconnected in ways that we will continue uncover with time and research. Because of these interconnections, often we can address complicated cases by starting with the basics and attempting to bring as much balance to the body as possible, and sometimes, seemingly unrelated conditions often improve. This is yet another example of the innate healing capacity of the body, as envisioned and described by chiropractic's forefathers.

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Cross Therapy Localization Using the Brain Neurolymphatic Reflex to Determine if a Muscle Needs Anaerobic Rehabilitative Exercise

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ABSTRACT:
The importance of having a patient rehabilitate a previously inhibited muscle after treatment of acute or chronic pain and/or following an acute or chronic injury is something that can be overlooked in a typical Applied Kinesiology (AK) practice. Clinical observation has shown that cross-therapy localization to a muscle's neurolymphatic reflex (NL) and the opposite brain NL will reveal the need for anaerobic rehabilitative exercise.

INTRODUCTION:
As mentioned by Leaf, the need for evaluating and/or prescribing rehab exercises to a patient has been underemphasized in the typical AK curriculum. This he determined was most likely because of the nature of Goodheart's practice. That is, Goodheart saw patients with a wide array of conditions and many times for very few visits. Leaf offered a method of evaluation for the need to determine whether or not a muscle should be rehabbed, and also the number of repetitions that should be used to rehab that muscle. This was demonstrated through repeated anaerobic muscle testing which resulted in inhibition that did not facilitate to its reflex, or appropriate nutrient(s) required for anaerobic muscle function. This paper presents an alternative method for determining if a patient should rehab a previously inhibited muscle in order to gain optimal function. Also, this challenge can be seen as a way to uncover a "51%'er" of Leaf's original findings regarding muscle rehabilitation.

DISCUSSION:
Applied Kinesiology offers a wide array of techniques that can facilitate an inhibited muscle. And very often, applying a technique only once will allow for sustained facilitation of a muscle on follow-up appointments. However, just because a muscle tests facilitated, the practitioner should not stop investigating. There are many techniques in AK that are able to find dysfunction in a muscle that tests facilitated. These include but are not limited to: fascial flush, strain/counterstrain, aerobic/anaerobic, RMAPi, pincer palpation, 51%'ers, etc. And all of these techniques point to a specific type of therapy that needs to be applied in order to regain optimal muscle function. The method of evaluation presented in this paper is intended to be used on a facilitated muscle to determine if anaerobic rehab exercises should be employed to regain maximum muscle function.

The challenge involves using cross-TL to a facilitated muscle's NL, and the contralateral brain NL. This cross-TL alone should not produce an inhibition in that muscle with just one test; and should not inhibit a strong indicator muscle. If in fact it does produce an inhibition as described above, a dysfunction between the muscle's related organ or gland and the brain should be suspected and investigated. Additionally, the muscle in question should not test inhibited while using standard anaerobic evaluation via repeated muscle testing. If it does test inhibited in this manner, check the NL and appropriate nutrition. If the muscle doesn't respond to its NL or nutrition, check the need for biologically-closed electrical circuits technique (BCEC). If BCEC technique does not produce a change, prescribe anaerobic rehab for that muscle based on Leaf's discovery of using the appropriate amount of repetitions.

When using this challenge, if a specific muscle needs rehab, the muscle will display inhibition with only cross TL to that muscle's NL and the contralateral brain NL, while being tested repeatedly in an anaerobic fashion. If the muscle tests inhibited under these circumstances, it is suggested that anaerobic exercise be employed in order to negate this challenge. Again, a positive challenge in this manner can be seen as a way to uncover a 51%-er of Leaf's original finding for when to prescribe anaerobic exercise. Additionally, as stated by Leaf, the number of repetitions it takes to produce the inhibition should be noted. And the number of repetitions per set should be

one less than the number of repetitions it took to produce the inhibition during the cross TL. For example, if the muscle inhibits after seven contractions with the cross TL, rehab should be done using six repetitions per set. A reliable way to discover how many sets of exercise that should be employed has not been determined. Rehab for the indicated muscle can cease once this type of challenge no longer produces an inhibited muscle. The number of days, weeks, or months that is needed to fully rehab the muscle and negate the challenge appears to be related to the severity of injury and/or length of time that pain and dysfunction has been reported by the patient; along with diet, lifestyle, nutritional factors, and overall health.

One hypothesis about why this method of challenge produces an inhibition is that an acute or chronic injury or pain scenario causes a type of functional neurogenic muscle disorder (with or without measurable atrophy to the muscle). Also, it's possible that this challenge is uncovering a metabolic decline in neurons that originate in the primary motor cortex or other brain areas involved with motor function. More research needs to be done in order to determine the exact reason for why this type of challenge produces muscle inhibition.

Nutritional considerations done in tandem with rehab should include supplements that help support nerve and muscle tissue. These include, but certainly are not limited to: anti-oxidants, essential fatty acids, vitamin B12, animal-derived nerve and muscle tissue, and especially myelin sheath-containing supplements. Herbal and homeopathic preparations should be evaluated as well.

CONCLUSION:

Applied Kinesiology has not paid much attention to the need for rehab of a muscle after it has been facilitated. This technique should help patients with acute and chronic injuries and/or pain regain optimal muscle function and rebalancing of the musculoskeletal system.

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The Xiphisternal Fixation and How it Causes Two Different Bilateral Muscle Inhibitions

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ABSTRACT:
A fixation complex involves at least two segments that have restricted movement between them. Goodheart discovered a number of spinal and pelvic fixations and correlated them with bilateral muscle inhibitions. This author discovered a fixation complex between the xiphoid process and the sternum that relates to a bilateral inhibition of the iliococcygeus muscles. Additionally, this fixation results in obturator nerve syndrome because if its correlation with pelvic floor muscle inhibition.

INTRODUCTION:
Spinal and pelvic fixations relate to specific bilateral muscle inhibitions. Goodheart discovered eight different spinal and pelvic fixation patterns; in addition to the upper and lower limbic fixations that correlate to the first rib and seventh cervical vertebrae, and the twelfth rib and first lumbar vertebrae, respectively. Additionally, other authors including, but not limited to, Brown, Charles, and Francis have discovered various other fixation patterns. This author has discovered a fixation complex that involves the sternum and the xiphoid process which affects pelvic function.

Leaf discovered how to find and fix the obturator nerve syndrome which results in bilateral (or unilateral) adductor muscle inhibition. This is often the result of pelvic floor muscle dysfunction, allowing for a prolapse of organs which compromises the obturator nerve as it exits the obturator foramen.

The xiphisternal fixation complex has been found to affect pelvic floor muscle function and thus contribute to obturator nerve syndrome.

DISCUSSION:
Through clinical observation, this author has found that a fixation between the xiphoid process and the sternum causes a bilateral iliococcygeus muscle inhibition. Therefore, the correction of a xiphisternal fixation will facilitate a bilateral iliococcygeus inhibition, if in fact that is the cause.

One common reason for the presence of obturator nerve syndrome is the inhibition of one or more of the pelvic floor muscles, including the iliococcygeus muscles. These muscle inhibitions cause a prolapse of pelvic organ(s) which in turn allows for peripheral entrapment of the obturator nerve(s) as they exit the obturator foramen in the pelvis. The result of obturator nerve entrapment is inhibition of the adductor muscles, which can be discovered via manual muscle testing of the adductors as a group. Therefore, not only does the correction of a xiphisternal fixation cause facilitation of the iliococcygeus muscles, but it indirectly facilitates the adductor muscles. The correction of this fixation can be treated via percussion over the xiphisternal joint, a high velocity-low amplitude thrust, or a respiratory adjustment.

The xiphoid process and the coccyx have a relationship on a ligament interlink basis. Additionally, the linea alba connects to the xiphoid process superiorly and extends to the pubic symphysis inferiorly. The ligament interlink connection and linea alba attachments are the most likely reasons this author surmises as the causative factor between the xiphisternal fixation and iliococcygeus muscle inhibition.

CONCLUSION:

A fixation between the xiphoid process and the sternum results in a bilateral inhibition of the iliococygeus muscles. Additionally, inhibition of these muscles can result in obturator nerve syndrome. Therefore, the correction of a xiphisternal fixation can ultimately lead to a correction of obturator nerve syndrome.

This fixation has been found in many patients with many different symptoms. And it is especially useful in helping patients overcome obturator nerve syndrome when standard pelvic and sacral corrections and/or rehabilitation of the pelvic floor muscles don't yield lasting results.

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Establishing The Electrical Field Around the Human Body

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ABSTRACT:
The existence of an electrical field around the human body has been hypothesized and alluded to for many years. Herein lies a method of measuring this field and the many applications thereof.

BACKGROUND:
This field has been called by many names ranging from the electromagnetic field to the auric field. With a micro volt meter you can show an electrical charge extending from the body from two (2) to three (3) inches. This distance increases around the heart and around the head. Kinesiologically, you can show that white sugar will weaken a normal indicator muscle by placing it on the body. The next question is, "Does it have to touch the body?" By placing an inert object on the body, such as a wood stick, you can now run the sugar down the stick while continuously pressing on the test muscle and the muscle will go weak when the sugar approaches two (2 to three (3) inches from the body. This experiment can be repeated over and over again with the subject blindfolded and the tester blindfolded with always the same result, proving that the body can sense the presence of the sugar at that distance. Sugar is a non-nutrition substance that the body recognizes as a void, which it tries to fill in, and a temporary weakness occurs. The test must be done immediately before the body can compensate for the weakness. The advertisers call the substance pure, which means they did not add anything. However, they do not tell you what they subtracted. The Russians have identified up to ninety (90) different trace elements in honey. We call white sugar deficient in 89 elements because it is nothing except a pure carbohydrate after it has been processed and bleached of the original nutrients.
Application

We can put a substance in this field to see if it strengthens or weakens the body. There are three possibilities; a wanted substance will strengthen a weak muscle, or an unwanted substance will weaken a strong muscle, or the substance will neither weaken nor strengthen, which means it is a neutral substance. This procedure can be used for nutrition, drugs, suspect allergens, cosmetics, dental material, etc.. One advantage is that the tester does not lose the indicator muscle when the substance is removed from the body, as can happen whey you put it in the mouth and it gets into the taste buds. This overcomes bad tasting substances and toxic substances that might be otherwise dangerous to put in the mouth. Always remember to test right away, before the body can compensate. A substance that weakens when left on the body will not show weak after awhile, but the body will be more fatigued at the end of the day if the substance is not removed.

Hidden reactions can be detected by placing the substance under the south pole of a magnet, which acts as an amplifier. Some doctors use the magnet to test all their substances.

Although the body never lies, it is more accurate to take the tablets out of the bottle to do the testing. This eliminates the possibility of the test being influenced by the material of the bottle, the color of the label, the glue on the back of the label, the color of the ink, the material the lid is made of, etc.. In other words, you are asking too many questions at one time.

Fritz Albert Popp, a German scientist, was the first to measure the wave length of this electrical field. He found it to be 635 nanometers. This is somewhere between red and orange on the electromagnetic spectrum. He also found the photons to be emitted coherently, which fits the description of a laser light. In other words, we humans are emitting a weak laser light from our bodies. This acts as a carrier wave, such as a radio station broadcast on, which can carry modulated waves on top of to produce the various sounds we hear on that station.

Since a helium neon laser also has a wave length of 635 nanometers, this explains why a helium neon laser is so therapeutic to the human body.

The doctor's hand can be positioned over the patient's body at the same distance that the sugar caused weakness to test for the different chakras. Then different sounds or colors can be used to see if they will change the original findings.

CONCLUSION:

The presence of this electrical field can be used by way of muscle testing to answer many questions. Its therapeutic application is unlimited. It is safe and non-invasive and can be demonstrated to exist to the skeptic.

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The Use of Magnets in the AK Practice

Sheldon Deal, D.C., N.M.D., DIBAK

ABSTRACT:
Understanding the difference between the north and south poles of a unipolar magnet can provide a good shortcut for several procedures in an AK practice.

BACKGROUND:
When you approach a black and white television set with the north pole of a magnet, the screen of the television picture will rotate counterclockwise. When you approach the screen of the television set with the south pole of the magnet, the television picture will rotate clockwise. This establishes the different magnetic energy fields surrounding the north and south poles of a magnet. This explains why opposite poles of a magnet attract each other when they face each other, because they are turning the same direction. It also explains why like poles of the two different magnets repel each other when they face each other, because they are turning in opposite directions.

APPLICATION:
When the north pole is placed on the belly of a normal testable, non-hypertonic muscle, it will unlock the muscle, thus verifying that the muscle is a good indicator and not a muscle that is locked or hypertonic. This takes the place of autogenic inhibition via pinching the spindle cells together, a procedure which some patients complain hurts them or bruises them.

When the south pole is placed on the belly of the same muscle, it will unlock the antagonist muscle. There is a neurological circuit between the right and left side of the body for each muscle. When this same procedure is done on the other side of the body, these four muscle tests confirm that this is a normal, non-aberrant functioning circuit which makes an excellent test muscle indicator. The thoroughness of this procedure is not normally done in applied kinesiology but it can detect many aberrant muscle patterns that go undetected.

I keep a magnet in each treatment room for this and other purposes in preference to pinching the spindle cells together in an effort to qualify the test muscle.

The south pole can be used as an amplifier to test if a substance underneath it is wanted by the body by making a weak muscle strong. It is especially useful when testing for allergies. As an amplifier it picks up hidden allergies that you would otherwise have missed. The south pole will also make a strong muscle go weak when placed above a substance that the body does not want.

Any acupuncture point that needs to be treated will T.L. (therapy localize). The south pole will exaggerate an overactive point and, thus, weaken your test muscle, or it will neutralize an under point and you will miss the fact that it is under if you do not test both ways with your magnet, The north pole will exaggerate an under active point and, thus, weaken your test muscle, or it will neutralize an over point that you would otherwise miss if you do not test both ways.

A good therapy for an under active point is to put the south pole of the magnet over the point and shine a laser through the hole in the magnet to tonify the point. You can also put the north pole over a point that is overactive and, by shining a laser through the hole in the magnet, you can sedate the point.

The north pole helps kill pain and the south pole speeds up circulation and promotes healing, I often tape the magnets over the area to be treated and send the patient home with them. The north pole on the eyelid for 20 minutes per day will shrink a small cataract.

The north pole over the sternum and the south pole over the upper dorsal spine simultaneously will torque the body counterclockwise and will lower blood pressure; and if you reverse the poles, you can raise the blood pressure, if needed. Sometimes we send the patient home with the magnets with instructions to do this five minutes per day with dramatic changes in blood pressure.

When testing substances on the body, as does Michael Lebowitz, you can avoid losing your indicator muscle since it is almost impossible to remove the substances from the taste buds on the tongue, This also avoids reactions to bad tasting substances and reactions to substances that may otherwise be toxic to the body.

When wearing a magnetic bracelet on the wrist, the red blood corpuscles (RBC‘s) are caused to spin as they pass by the magnet via the radial artery; this breaks up clumping and cleans the debris that has accumulated on the surface of the RBC‘s. This has a tremendous cleansing effect on the body.

CONCLUSION:

Magnetic therapy has multiple uses in the AK practice. It is a safe nontoxic noninvasive procedure that provides another piece of the jigsaw puzzle in our approach of treating the patient via natural methods. Mainly because the north pole sedates and the south pole tonifies.

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Hidden Hyoid Dysfunction

Don Grundmann, D.C.

ABSTRACT:
The purpose of this paper is to discuss a technique for discovering a masked/hidden hyoid dysfunction.

Key Indexing Terms: Cross K-27, Hyoid

INTRODUCTION:
A 22 year old male, a physical trainer by profession and in excellent physical condition, presented during an examination inclusive of Applied Kinesiological techniques for investigation a negative manual muscle test (strong R. Quadriceps) response to Cross K-27 Therapy Localization (T.L.) for possible switching. Additionally the supine patient showed a negative response for possible hyoid dysfunction with tongue protruded to ceiling. However with the patient holding contacts for Cross K-27 a positive (weak R. Quadriceps) response was elicited when tongue protrusion was added as a stressor to the test.

Standard spindle cell treatment subsequently negated the positive (weak R. Quadriceps) response regarding hyoid dysfunction.

Summary of Procedure

1) Test standard switching with K-27 contacts held. Negative response.
2) Test for Cross K-27. Negative response.
3) Test for hyoid dysfunction by straight tongue protrusion. Negative response.
4) Hold contacts for Cross K-27 and retest for hyoid dysfunction. Positive response – weak muscle.
5) Treat hyoid dysfunction by standard method.
6) Redo number 4. Negative response.

DISCUSSION:
Hyoid dysfunction may not express itself through the standard test procedure.

CONCLUSIONS:
Additional neurological stress may be needed to unmask hidden neurological dysfunction.

Pain Elimination Through Laser Application

Don Grundmann, D.C.

ABSTRACT:
The purpose of this paper is to discuss a technique for elimination of pain.

Key Indexing Terms: Laser, Laser Light, T.L., Pulse Point

INTRODUCTION:
A 22 year old male, a physical trainer by profession, expressed that he was experiencing periodic moderate to severe pain, inclusive of his entry into the office, at 5 different areas –

1) Medial left knee
2) Medial right knee
3) Medial left elbow
4) Medial right elbow
5) Left anterior shoulder area, roughly over corocoid process

Left side pain was noticeably greater than right side pain and all pain areas consisted of areas roughly the size of a silver dollar. Pain had started approximately one week prior to treatment and had advanced in frequency, duration, and intensity from a sporadic nature to constancy with little remission.

Patient was found to have positive Therapy Localization (T.L.) at the second pulse point on the left wrist. Alarm points for Gall Bladder and Liver showed positive for T.L. Both left Pectoralis Major and Popliteus muscles showed weakness under manual muscle testing. Positive T.L. was found at all expressed pain locations.

Patient was treated with laser light from a Erchonia P-5000 laser set at a frequency of 38 n.m. for the Gall Bladder for one minute. Laser light was directed superior and inferior along the length of the supine patient for this time period. Post treatment manual muscle testing of all pain areas by T.L. showed marked improvement of Pectoralis Major and Popliteus strength with small residual weakness. Patient was then treated with laser set at frequency of 35 n.m. for the Liver for one minute and along length of supine patient as with the previous treatment. Post treatment examination showed that all pain areas were now negative for T.L... Pectoralis Major and Popliteus muscles were now at full strength. Previously active alarm points were negative. Left wrist pulse point was now negative with T.L.

DISCUSSION:
Patient experienced dramatic improvement with partial regression to return of approximately 40% of symptomology within one week of treatment. Subsequent second treatment session permanently eliminated primary pain patterns as noted above.

CONCLUSION:
Laser light produces dramatic neurological and functional changes in conjunction with Applied Kinesiological analysis techniques inclusive of acupuncture investigative procedures. Both diverse pain patterns and acupuncture meridian dysfunction respond dramatically to laser treatment.

Thinking Out of the Physical Box: Utilizing Ancient Kabbalistic Concepts of the 72 Names and the Four Walls of Judgment in an Applied Kinesiology Setting

Matthew Keschner, D.C., DIBAK, C.C.S.P.

ABSTRACT:
Walter Schmitt, DC, DABCN, DIBAK once said that he would draw a circle around the Triad of Health, and label that sphere as the spiritual part of health. Like postural movement causing movements of the body's shadow, spiritual applications for the soul may affect the physical body. Ancient Kabbalistic techniques, dating back 4,000 years, utilized in an applied kinesiology setting and demonstrated with muscle testing, has shown such an effect.

Key Indexing Terms: Applied Kinesiology, Chapman's Reflexes, Emotional Work, Cold Low Level Laser, Kabbalah, Spiritual

INTRODUCTION:

The topic of spiritual techniques affecting the physical body is the proverbial elephant in the applied kinesiology practitioner room. Both Dr. George Goodheart and Albert Einstein frequently credited their dreams as the source of their most innovative ideas and techniques. Dr. Goodheart commonly referred to the 'body wisdom.' The foundation of chiropractic was built upon the concept of 'innate intelligence'.

Ancient spiritual concepts and techniques, like those of the 4,000 year old teachings of Kabbalah may be applied using muscle testing as an indicator of effects. Application of techniques, in this context, in affecting emotional, physical, and physiological processes may utilize meditating on unpronounceable combinations of letters, referred to as the 72 Names, as well as using cold low level laser therapy (violet and red lasers at 635 nm wavelength) while referencing what are known as the Four Walls of Judgment.

DISCUSSION:

"All of you…who see land beyond the horizon, who read sealed, hidden missives and books, who seek for buried treasures in the earth and in walls, you who teach so much wisdom, such high arts – remember that you must take unto yourselves the teachings of the Kabbalah if you want to accomplish all this." – Paracelsus, one of the founding fathers of Western medicine[i]

Kabbalah

Yehuda Berg, author of The *72 Names of God*, reports that Kabbalah traces back more than 4,000 years, beginning with Abraham, known as the father of three great monotheistic religions: Judaism, Christianity, and Islam (in no particular order). Abraham identified two spheres that affect our lives: spiritual and physical. He revealed a code of laws for the workings of both of these spheres. He explained how the spiritual world intersects with the physical world, and what we can do at that intersection to create happiness.[ii] Interestingly enough, contemporary practice and study of Kabbalah teachings, partially as a result of the publicity surrounding celebrity Kabbalah students such as Madonna, Demi Moore, Elizabeth Taylor, and others, is viewed today more as 'New Age' than biblical.

Berg writes, "science, physics, biology, religion, spirituality, and philosophy all have their roots in Kabbalah, like branches on a tree that emerge from a single seed." Noted thinkers that embraced Kabbalistic ideology include Pythagoras, Newton, and Einstein.[iii]

Intriguing similarities between Kabbalah and modern science are evident. For example, Kabbalah teachings state, " When the Light hid, a point of space erupted into existence, also marking the birth of time. This occurred

some 15 billion years ago. …Four different forces unfolded from the initial state of unity during the process of Creation."[iv]

Renowned physicist Stephen Hawking, as reported by Yehuda Berg, explained, "The universe, and time itself, had a beginning in the Big Bang about 15 billion years ago…Before this time all four fundamental forces – gravity, electromagnetism, and the strong and weak nuclear forces – were unified."[v]

Additionally, Kabbalah theory (from 16th century Kabbalist Isaac Luria) explains, "Ten curtains were erected to gradually diminish and thus hide the dazzling radiance of the Light. These ten curtains created ten dimensions… Reality consists of ten dimensions. Nine of these dimensions are beyond time and space. Only our physical world contains space-time. Six of the ten dimensions are actually folded into one."[vi]

Similarly, physicist Brian Greene, as reported by Berg, referring to quantum physics Superstring Theory, comments, "For string theory to make sense, the universe should have nine space dimensions and one time dimension, for a total of ten dimensions."[vii]

Dr. Michio Kaku, author of "Hyperspace", as reported by Berg, remarks, "Physicists retrieve our more familiar four-dimensional universe by assuming that, during the Big Bang, six of the ten dimensions curled up (or "compacted") into a tiny ball."[viii]

As to how the spiritual actions may affect the physical world, think of yourself as the spiritual (referred to by Kabbalah teachings as the 99%), and your shadow as the physical (referred to by Kabbalah teachings as the 1%). Whatever movement or posture you perform will likewise manifested into same movement/posture of your shadow. Similarly, in many eastern philosophies it is noted that a malady is seen in one's aura before it manifests into physical form, and in order to heal a person, one must first clear the aura.

72 Names

"God gave this cutting-edge technology to Moses to be shared with all people, so that humans could unleash their own God-like powers and attain control over the physical world." – Yehuda Berg, *The 72 Names of God*[ix]

In his book, *Dialing God,* Yehuda Berg writes, "The 72 Names of God are not 'names' in the ordinary sense… instead, they are channels of the Infinite spiritual current that flows through the world. By connecting to these sources of spiritual power, we acquire protection from any and all forms of negativity and danger. We remove the blockages that separate us from total joy and fulfillment. We open the pathways to transformation – for ourselves and for the entire world."[x]

Kabblalist Rav Berg, in the foreward to Yehuda Berg's *The 72 Names of God,* refers to the Names as a set of supremely powerful spiritual tools, an entire technology of healing, protection, and positive change. The letters composing these names are derived from three biblical verses (*Exodus,* Chapter 14, verses 19, 20, and 21), each containing 72 letters, describing the parting of the Red Sea as the people of Israel fled oppression and slavery in Pharoah's Egypt. Berg comments that these names contain all technology – past, present, and future – for the elimination of chaos in one's life. Berg explains that the 72 Names are a technology for asserting the power of human consciousness over physicality. That is, the power of mind over matter…"[xi]

In describing the utilization of the power in these 72 Names, Yehuda Berg remarks, " In fact, God never answers prayers. It is people who answer their own prayers by knowing how to connect to and utilize the divine energy of the Creator and the God-like force in their own souls." [xxi]

For a detailed description of how the exact names were encoded and deciphered from the Bible please refer to page 11 of Yehuda Berg's text, *The 72 Names of God.*

The 72 Names of God are not actual words, nor are they pronounceable. Berg explains that they are sacred sequences, activated visually. The Hebrew word for letter actually means "pulse" or "vibration". Each word, made up of three letters, pulsates or vibrates a flow of energy that transfers to the eyes of the beholder. The three letters signify three forces: a positive charge, a negative charge, and a ground wire, creating a circuit of energy channeling energy into the beholder.[xiii]

On the significance of letters, Kabbalah Centre teacher, Benjamin Malul, in his course, "The Light of *The Zohar*" comments, "letters are the code - the delivery system to deliver the Light into our Life...For example, when you speak words, you realize that there is power in the words that you are saying. The combination of letters in your words can take people down or elevate them. So words have energy! Words have power, but the letters are the Seed! If you know how to connect and combine them in the right way, you can elevate someone (ex: saying, 'Thank you'). If you choose the wrong combination of letters, that structure will cause someone to lose something today ('you look bad!'). The Letters are the vehicle to deliver all of the energy if you choose the right combination. The best combination and structure of letters give us the codes of the entire Universe…The Universe vibrates according to these letters. Each month even has its own unique two Hebrew letters, as does every planet."[xiv]

Although comprised of Hebrew letters, the 72 Names of God are intended for all of humanity, not just those of Jewish heritage or religious affiliation. Berg states that the 72 Names functions at the DNA level of the soul, at what physicists call the quantum level of reality. He writes, "The power of the 72 Names operates strictly on a soul level, not a physical one. It's about spirituality, not religiosity. Instead of being limited by the differences that divide people, the wisdom of the Names transcends humanity's age-old quarrels and belief systems to deal with the one common bond that unifies all people and all nations as one – the human soul."[xv]

In applying meditation of the 72 Names, I noted which patients were of Jewish heritage or religious background, and which were of non-Jewish heritage and religious background. It should be noted that all patients tested were open to (and enthusiastic about) the utilization of spiritual practices and concepts in general. In keeping to the mantra of 'mind over matter', theoretically, results may not have been as significant if the participants were closed off to any form of spiritual practice.

Rav Berg stresses that in order to derive benefit from the 72 Names, one must demonstrate proactive behavior and step back from reactive behavior. If we are concerned with winning (and with a certain result), that's enabling the ego.[xvi] Not having an attachment to the outcome basically strips the Ego of its power. In my own practical and physiological usage of the 72 Names, I have never told my patients of a desired outcome from scanning a Name and then reciting a meditation. I am curious that if I had indeed verbally stated an intended outcome, would the patient have formed an attachment to the outcome, and in doing so amplified the Ego, thus negating any beneficial effects of utilizing the 72 Names? At the time of writing this paper, I have yet to experiment with the resulting difference from presentation and explanation. In that the power of the 72 names lies in its utilization after relinquishing the Ego, and thus while operating at a higher level of consciousness, the Names are utilized after performance of The Emotional Equation and other emotional techniques I have authored in past *Proceedings of the ICAK* (2008, 2009, 2010, 2011). However, despite the impressive results, when testing weak muscles for facilitation after the 72 Names and meditations, all testing and results were performed independent of any other emotional techniques. It remains subject to investigation if the beneficial effects of the 72 Names would be amplified and complete facilitation of all inhibited muscles observed if the 72 Names scan and meditation were performed after such emotional techniques and devices enabled the patient separation from the ego. In clinical practice, 100% facilitation of inhibited muscles has been achieved 100% of the time, but this has included physical chiropractic adjustments, use of the percussor, color and eyelight therapy, along with optimizing dysfunctional organs and glands.

Please keep in mind that it is quite common for one to think, "This is too simple. This is too good to be true. It's all placebo, hocus-pocus, and airy-fairy stuff." Since in theory, the Light that the Names reveal banishes the darkness of the Ego, it is quite natural for the Ego to mount its thought defenses and issue a pre-emptive, dismissive attack. In this case, skepticism is a weapon of the Ego, used at your detriment. Thus, as mentioned previously, only patients that were open to spiritual practice, and of any religious affiliation or background, were used as participants.

PROCEDURE:
(It is advised to perform this technique following other emotional techniques, including the Emotional Equation)

1. Find the inhibited muscles. This is not a necessary step to perform, but may help confirm the relevance of this process to both the patient as well as the practitioner.
2. Find a strong indicator muscle. You may utilize the pectoralis major clavicular for its correlation with emotional stress.
3. The patient may go name-by-name, right to left, and from the top down, scanning the names until one causes the strong indicator to weaken.
4. Instruct the patient to rest his/her eyes on the letters with full attention, but without undue focus or concentration. Peruse the three letters of that particular name from right to left. Instruct the patient to 'inhale' the letters through his/her eyes, until they are able to picture them in mind without looking.
5. Now have the patient read the respective accompanying meditation aloud. (Meditations found in the Yehuda Berg's book, *The 72 Names of God*). As the patient reads the meditation, the practitioner taps the heart chakra (thymus) as well as the top of the forehead and the point above the nose, between the eyebrows, commonly referred to as the "brow point" or the "third eye point."
6. Next have the patient gaze upon the letters again, perusing from right to left, inhaling the letters through his/her eyes, until the patient can picture the letters in the mind with the eyes closed.
7. For added effect, have the patient visualize the letters opposite to its color presentation. For example, if viewing black letters on a white background, have the patient picture in their mind white letters against a black background.
8. Retest the strong indicator muscle while the patient gazes at that particular name.
9. Scan the names again, from the beginning, right to left, and from the top down.
10. Continue steps 3-9 until the patient can scan upon each and every Name without an inhibition of the strong indicator.
11. If desired for validation, retest all previously weak muscles.

Table 1 (located on TABLE page) shows the results of manual muscle testing before and after gazing upon the indicated Names and reading aloud the corresponding respective meditations. Weak muscles were first determined via usage of the TS Line, posture assessment, and confirmation of the suspected weak muscles using manual muscle testing. The precise numbers of weak muscles, and not the names of the muscles, were recorded in the accompanying table. These same muscles were tested immediately after application of the Names. A significant decrease in the number of facilitated muscles, regardless of religious affiliation and background was observed. As there are some "energy" techniques that take some time before the patient notices a perceived effect, it remains to be investigated whether the remaining inhibited muscles that did not facilitate immediately would have facilitated after an hour, or by the next day, without employing any other modalities or techniques.

4 Walls of Judgment

David S. Walther, in his text, *Applied Kinesiology: Synopsis, 2nd Ed.*, notes "The effect of the mental side of the triad of health on function can readily be observed with applied kinesiology testing. When a person concentrates on a subject that is emotionally detrimental, a previously strong indicator muscle will test weak. The muscles that

appear to reflect the emotional thought processes most efficiently are the pectoralis major (clavicular division) muscles."[xvii] Accordingly, merely referencing one of the Four Walls of Judgment may create a similar effect, as it may stimulate the 'seed' of such emotional stressors. In other cases, an effect may be hidden. Utilization of the violet cold low level laser (635 nm), described later in the procedure section, may help bring the issue to the surface with a resulting inhibition of a previously strong indicator muscle.

Dr. Walter Schmitt, in his *Uplink* Newsletter, adds, "even when considering factors like correction of injuries, we still see patients whose emotional stressors seem to be at the forefront of their clinical presentation.[xviii] The seeds for many psychological stressors may very well be the subsconscious effects of the Four Walls of Judgment (Negativity).

Kabbalah Centre teacher David Ghiyam describes the basic premise of the Four Walls of Judgment as part of a series of lectures entitled, "Chart Your Course." The Creator creates a trust fund of energy ("Light") for you, so you will receive everything you need. Your Higher Soul serves as the trust fund officer, and distributes it in a merciful way, with a little bit of a process - a little bit of judgment. This would be akin to a father establishing a trust fund for his son, but putting safeguards into place so the son can only receive what he can handle. During Rosh Hashanah (commonly known as the Jewish new year), the trust fund officer falls asleep. The Creator wants to give you everything, but the Angels intervene and say, "wait a second, let's judge the situation!" The Angels present four categories of short-circuits which create a four-sided wall around the trust fund of energy. The four-sided wall consists of idolatry, bloodshed, adultery, and evil speech. All the negativity that you have created for the entire year comprise these four walls, and block the blessings from flowing into your physical world. So, in essence, the Angels use the four walls as evidence against you. If they had no evidence, you would receive everything you need! (Kabbalah enlists a practice called *Teshuvah* to erase all the negativity and judgments, but that is beyond the scope of this paper. For more information, contact the Kabbalah Centre at www.kabbalah.com. It is the opinion of this author that any spiritual practice you can do for yourself may be infinitely more powerful than having someone else do it for you.) [xix]

While this paper proposes using cold low-level laser to affect emotions caused by the aspects of the Four Walls of Judgment, therapy of this nature is not to be viewed as repentance, nor as a "get-out-of-jail-free card" for any past wrongdoings. Total elimination of negativity and judgment, in a spiritual sense, occurs by effort of the subject, and not by paying a third party to do the work for them.

The Four Walls of Judgment (Negativity) of Adultery, Idolatry, Bloodshed, and Evil Speech (sometimes referred to as 'Evil Tongue') are explained below. It is important to note that there may only be a mere observation of one of the Walls, and not a personal occurrence or action, for an effect to be seen. For example, let's take 'Evil Speech' – in which one talks and/or thinks poorly of someone else. A person may pride himself/herself of never speaking poorly of anyone, yet may overhear a conversation where a different individual is complaining about another. This witnessing alone may be all that it takes to induce an effect. Therefore, please instruct the patient not to take any of the findings personally. The last thing we, as practitioners, want to create is a patient's judgment of himself/herself, or a reaction to perceived judgment.

According to Kabbalah Centre teacher Eitan Yardeni, "Every time we commit a negativity, in the unseen, 99% world, we create a force of judgment. It's unseen. It's not physical…What happens in the metaphysical creates the physical. Anything that happens in my life physically is because of the imbalance or the balance in the metaphysical world."[xx]

Adultery

Adultery in this sense does not necessarily mean having an extramarital affair. It may, in fact, mean an extramarital affair or behaving dishonestly towards one's partner, married or otherwise, but also may have different meanings. It may include any type of sexual thoughts or witnessing anything of a sexual nature (movie, book, etc). It may also include having to listen to someone else verbally relating their sexual or even romantic desires (like a friend telling you that they think their co-worker is attractive).

Idolatry

Idolatry does not imply worshipping a ram's head. Kabbalah Centre teacher Michael Moskowitz, in his course on "Spiritual Detox" comments that the Hebrew words for 'idol worship' literally mean 'strange work.' In this sense, idol worship is choosing to get your energy from anything other than a proactive Vessel for the Light: it is an inappropriate way to connect.[xxi]

Similarly, one can create idolatry by deriving his/her energy from a romantic interest, from an obsession, a situation, and even from a persistent emotion that one feeds off of. Too often, we find that in the end we feel as if we have *expended* all of our energy to this person or situation, even though we felt we were receiving energy (one experiences an adrenaline rush when angry) while engaged with a certain person, action, or situation.

Bloodshed

A patient does not have to be a murderer to present with 'bloodshed.' Bloodshed may be causing harm to anyone by any means. Someone may have sabotaged a co-worker, or taken a harmful action towards a friend. Even a non-action, like ceasing communication, may be considered Bloodshed since it was done with a hurtful or harmful intent. Simply thinking of a hurtful intent, even one if does not intend to follow through, as well as hurtful thought ("I hope they don't get the job! I hope he fails!") may create an effect resulting in a positive finding of 'bloodshed.' Witnessing harmful acts, as in on the street, between two unknown parties, or while watching a drama on television, may also affect the patient creating this particular Wall.

Evil Speech (Evil Tongue)

Evil Speech usually refers to the spoken word. Malicious words, or gossip, about someone, even words (like insults or an argumentative conversation) said directly to another. According to Kabbalah Centre teacher Eitan Yardeni, in his "Weekly Zohar Study" refers to Evil Speech as speaking bad about someone, and speaking to a person or about a person other than for the purpose of assisting him/her. Additonally, David Ghiyam refers to Evil Speech as talking sarcastically as well as talking from need or wanting approval. Evil Speech applies to the written word – handwritten, typed, text messages, or anything of the sort.[xxiii] It may also refer to the thought form. Thinking about the negative qualities of another, akin to gossiping in one's own mind ("oh, that person, he's such a bad person; such a liar; he's mean) may lead to a finding of "Evil Speech."

When the "Four Walls" are cleared, you will not want to take part nor be around that particular behavior. Ghiyam elaborates (using evil speech as an example), "you will probably hate to hear evil speech from your friends. You don't want to hear it. You may be very sensitive around depressed or negative people….you get to place where you are sick of it. You are sick of constantly judging people – it destroys your life. You get sick of constantly wasting your words, looking for other people's approval. Enough!" How do you know if you have not fully cleared it? Ghiyam continues, "If the desire (for evil speech, etc.) is there, the wall is there!"[xxiv]

PROCEDURE:

1. Select a strong indicator muscle (pectoralis major clavicular preferred due to its emotional correlation), and therapy localize to the area considered to be the Heart Chakra (thymus). Indicator muscle remains strong.

2. Slowly call out the 4 walls of Judgment: Adultery, Idolatry, Evil Speech, Bloodshed (in no particular order).
3. If you observe an inhibition of the previously strong indicator muscle, move your red cold low-level laser (frequencies of 9, 16, 42, 53 used; wavelength 635 nm) or dual violet and red laser to the various organ points – both Neurolymphatic/Chapman's Reflexes and Versendaal (points used by N.E.T and T.B.M.) are selected until you find a facilitation of the weak muscle.
4. Focus the red (or dual violet and red preferred) cold low-level laser on the indicated area as well as the heart while the patient holds a hand on the heart and a hand on the forehead.
5. Re-check for indicator muscle weakening for each of the 4 Walls of Judgment. Treat as indicated.
6. When inhibition is no longer observed (or if not observed at all), now scan the body with the violet 635 nm laser (patient Therapy localizing the Thymus/Heart Chakra) while verbally calling out each name of the Four Walls. One laser body scan per name.
7. If a weakness is induced, use the red and violet lasers on the indicated area as well as the heart (chakra) region while the patient holds a hand on the heart and a hand on the forehead.
8. Re-check for each of the Four Walls.

'Four Walls Assessment' may be conducted before or after most emotional techniques, but before the application of the Emotional Equation. Levels of Consciousness were found to be significantly higher when assessed following Four Walls Assessment. Meditation on the 72 Names will likely have the most beneficial effect when performed following the Emotional Equation.

Application of the 'Four Walls' procedure did NOT render other emotional techniques as unnecessary. Emotional factors were present with using different emotional techniques. Although beneficial and effective, it is the opinion of this author that the "Four Walls" procedure should be used to supplement other emotional techniques, as opposed to as a stand-alone procedure.

The Four Walls concept was presented as part of a judgment process that occurs during the month (zodiac month of Virgo) before the Jewish Holiday of Rosh Hashanah. Findings were more readily apparent during that time, regardless of religious affiliation.

CONCLUSION:

The utilization of the spiritual concepts and techniques of Kabbalah, such as the 72 Names and the Four Walls of Judgment, allow for significant beneficial results, including facilitation of previously inhibited muscles, clarity of mind (as reported by the patient), and a higher level of Consciousness (when assessed using muscle testing against Hawkins's Map of Consciousness). Further investigation needs to be performed by both isolating the techniques, as well as combining them with other emotional techniques for an enhanced effect. Future determination of results should not cease at muscle testing immediately following application of techniques, but also noted an hour later, a few hours later, and the next morning. Subjective measures of stress should be taken, as well as physiological measures such as heart rate and muscle tone.

At the time of writing, Matthew G. Keschner, DC, DIBAK, CCSP has been a student of the Kabbalah Centre in New York, NY for about seven months. Although Jewish, he does not a have biased religious interest in the results, having also been a student of the more Christian-based "Course in Miracles". Additionally, he is certified as an advanced Kundalini Yoga instructor based in Sikh Dharma, Theta Healer ("Creator-based" energy-based work), and Sedona Method coach (more recently developed Sedona Method practice shares viewpoints with Indian yogic philosophies like that of Yogananda as well as the Hindu Maharshi). Dr. Keschner does not receive any compensation from the Kabbalah Centre for his work, nor for any new students that may study Kabbalah as a result.

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TABLES

Table 1

Note: In all patients tested were open to (and enthusiastic about) the utilization of spiritual practices and concepts in general. Process was applied as a stand-alone procedure, without any prior ego-clearing techniques.

Patient	Religious Affiliation/ Background	Number of Inhibited Muscles Before 72 Names Process	Number of Inhibited Muscles Remaining After 72 Names Process
Patient One	Non-Jewish	5	1
Patient Two	Jewish	6	2
Patient Three	Jewish	3	1
Patient Four	Non-Jewish	4	2
Patient Five	Jewish	5	1
Patient Six	Jewish	6	2
Patient Seven	Non-Jewish	5	1
Patient Eight	Non-Jewish	6	2

כהת	אכא	ללה	מהש	עלם	סיט	ילי	והו
הקם	הרי	מבה	יזל	ההע	לאו	אלד	הזי
וזהו	מלה	יי	נלך	פהל	לוו	כלי	לאו
ושר	לכב	אום	ריי	שאה	ירת	האא	נתה
יין	רהע	וזעם	אני	מנד	כוק	להו	יזו
מיה	עשל	ערי	סאל	ילה	וול	מיכ	ההה
פוי	מבה	נית	נגא	עמם	הוש	דני	והו
מוז	עגו	יהה	ומב	מצר	הרו	יל	נמם
מום	היי	יבמ	ראה	וזבו	איע	מנק	דמב

The Emotional Equation Addendum: The Fifth Component of Ego

Matthew Keschner, D.C., DIBAK, C.C.S.P.

ABSTRACT:
John Diamond, in his work, *Life Energy*, suggested that if mental attitude is changed, stress is prevented, and disease will not occur.[i] Going one step further, advancing through the Levels Of Consciousness, as defined by David Hawkins in his work, *Power Vs. Force*[ii] , (or the Emotional Stages of Freedom as defined by Hale Dwoskin in *The Sedona Method*™[iii] , the originator of both is actually Virginia Lloyd) can alter perception and the resulting attitudes, preventing stress and disease. Application of The Emotional Equation focuses on raising the patient's Level of Consciousness and affecting future thought processes, as opposed to simply neutralizing a current or past thought stressor. Utilization of a Fifth component of Ego, broken down into its five extensions, as defined by the teachings of Kabbalah, greatly enhances this process.

Key Indexing Terms: Acupuncture Head Points, Meridian, Emotional Recall, Applied Kinesiology, Chapman's Reflexes, Beingness, Consciousness, Emotions, IRT, Life Energy, Kabbalah

INTRODUCTION:
Gregg Braden, in *Walking Between the Worlds: The Science of Compassion,* writes, "Researchers have now demonstrated to the Western world that human emotion determines the actual patterning of DNA within our bodies… Furthermore, the demonstrations have shown that the arrangement of matter (atoms, bacteria, viruses, climate, even other people) surrounding your body, is directly linked to the feeling and emotion from within your body."[iv]

Eckhart Tolle, in *A New Earth*, remarks, "the primary factor in creation is consciousness."[v] Tolle elaborates on the importance of consciousness: "No matter how active we are, how much effort we make, our state of consciousness creates our world, and if there is no change on that inner level, no amount of action will make any difference."[vi]

David Hawkins, in his work, *Power Vs. Force*, building upon the behavioral kinesiology techniques of Dr. George Goodheart and Dr. John Diamond, notes that the difference between treating and healing is that in the latter, there is not merely a recovery from symptoms, but bringing about an absolute removal of the condition through **a change of context.**[vvi] In his next work, *The Eye of the I*, Dr. Hawkins likens social programming to the software of a computer, while the level of consciousness is the hardware.[viii]

The Emotional Equation, as set forth my 2009 paper, "The Emotional Equation: Raising the Level of Consciousness," in the *2009 Proceedings of the ICAK*[ix] seeks to bring about such a change in context in the patient by raising the level of consciousness directly, as opposed to simply quelling a stressor. It utilizes a combination of concepts from such techniques as Acupuncture Head Points (Roger Callahan), IRT (Injury Recall Technique), Dr. John Diamond's *Life Energy*, Dr. Scott Walker's *Neuro-Emotional Technique*, Applied Kinesiology emotional protocols from the works of Dr. George Goodheart, and Dr. Victor Frank's *Total Body Modification.* It's foundation is the woven fabric of the theories of Don Miguel Ruiz, Eckhart Tolle, Dr. David Hawkins, Gregg Braden, Lester Levenson's *The Sedona Method™*, clinical psychologist Dr. Joanne Galst, authors Esther and Jerry Hicks, and intuitive counselor Tony LeRoy.

Added to the original 2009 format is a 5th component: The Ego, broken down into its five extensions, as defined by the teachings of Kabbalah.

DISCUSSION:

In *Power Vs. Force,* Dr. Hawkins remarks, "It is helpful to remember that neither Truth nor Enlightenment is something to be found, sought, acquired, gained, or possessed. That which is the Infinite Presence is always present, and its realizations occurs of itself when the obstacles to that realization are removed."[x] This being said, The Emotional Equation helps one directly ascend the Levels of Consciousness by uncovering and releasing the blocks within the Equation's components. By releasing these constraints through physiological means, the true inner Beingness or Presence that is inherent in each of us is revealed. It should be noted that the patient should self-utilize processes that release these same constraints. These processes include meditation, as well The Sedona Method™, in addition to supplemental products such as herbal teas and flower essences. Additionally, simply reading works by authors who operate at a high Level Of Consciousness, such as Tolle, Hawkins, and Goodheart will subtly raise one's Level of Consciousness, as well as spiritual yet not religious work, such as Dr. Helen Schucman's *A Course In Miracles* as well as Kabbalah's *The Zohar.* In this way, The Equation can be used as a kick-start to raising the Level of one's Consciousness and not merely as a band-aid or a temporary improvement.

Rather than repeating the original concepts and theories of the Emotional Equation, please refer to my 2009 paper, "The Emotional Equation: Raising the Level of Consciousness," in the *2009 Proceedings of the ICAK*[xi] . This paper will focus on a newly added fifth component – the Ego – and its subcomponents, the five extensions of the Ego, as defined by the teachings of Kabbalah.

<u>The Emotional Equation</u>

The original equation was set forth as:

Truth = Love + Awakening + Compassion + The Will.

The four components of Love, Awakening, Compassion, and The Will are further broken down into subcomponents. I have amended The Emotional Equation, as of this 2012 writing to:

TRUTH(FREEDOM)= LOVE + AWAKENING + COMPASSION + THE WILL + EGO

Breaking the Ego down into its five extensions (subcomponents):

I. Control
II. Pride
III. Judgment
IV. Anger
V. Hatred

As will be discussed in the Step-by-Step Procedure later in this paper, the block that is found in one of these components is then negated at one of the Levels of Consciousness contained in Hawkins's Map of Consciousness. It is at this intersection of Truth (Sub)Component and Level of Consciousness that the constraint to be released is found. As outlined in the procedure, following release by means of both Emotional Recall utilizing both Acupuncture Head Points and Emotional Quick Fix with IRT, as well as an N.E.T. type of adjustment utilizing Diamond's *Life Energy Principles*, Acupuncture Alarm Points, and Dr. Victor Frank's TBM[xii] sequences, the person ascends to a higher Level of Consciousness, at which he or she may act with more clarity and less reactivity. In addition, at the higher Levels, a state of Non-Duality exists in which the person is able to maintain a state of Non-attachment to the Ego and whatever stories and stressors it imagines it has. Non-attachment is not to be confused with Detachment, which leads to Apathy, one of the lowest Levels of Consciousness.

According to Kabbalah Centre teacher, David Ghiyam, " As the Ego grows bigger (that person) begins to judge and he thinks he knows more, and he disconnects."[xiii] He later affirms that when one pushes down the Ego, the Soul can shine. In a later *Tree of Life* lecture, Ghiyam comments, "you develop a certain ego that things have to be a certain way."[xiv] He additionally remarks that when your Ego makes your decisions for you, you act with a lack of clarity. Furthermore, Ghiyam asserts that "every time you develop Ego, that is the worst short circuit…Ego is so dangerous, and even if you are on a high spiritual level, the Ego can destroy you."[xv] Ultimately, the Ego causes pain. Ghiyam continues in a later *Tree of Life* lecture, "The Ego attaches itself to things, money, approval – the Ego has tentacles that attach to things, so we go through pain. We go through suffering, and things leave us."[xvi]

The Five Extensions of Ego

I. Control

Hale Dwoskin, narrator and author of *The Sedona Method® Basic Course*, remarks, "When we want to control, we feel like we don't have control." He adds, "When we want to control, we feel out of control and like we need to take action to get it back…As we let go of wanting to control, we feel more in control."[xvii] Without a feeling of a need or want to control, everything would feel more at ease and already the perfect the way it is. There would be a greater acceptance of what is and no longer an inner conflict against the perceived reality.[xviii]

Renowned transformational healer and alchemist, Jaden R. Phoenix, spoke on the importance of relinquishing control in her lecture on "Energy vs. Consciousness." Giving up control allows one to move into a space of knowing, and in this space one actually has more power. It is a paradox – the harder you try (and more control you assume), the less effective you are.[xix]

In the protocol, you may ask the patient to think of anything having to do with control. That is, you may request something along the lines of:

"Think of anything having to do with control. It may have to do with your wanting to control someone or something, or you feel controlled by someone or thing. Maybe you are simply a third party observer and you witness a person try to control someone else or something else."

II. Pride

According to Kabbalah Centre teacher Yehuda Ashkenazi, in his lecture series entitled, "Messages from the Creator", Pride is a big part of the Ego. Pride may come from a feeling of "I Know," which will paradoxically block intuition and inner knowingness.[xx]

David Hawkins, MD, in *Power v Force*, comments that pride enables the mind to resist useful and helpful change. Pride blocks growth, gets in the way of our ability to love, and is the source of Hate. Pride, in the form of the self-justified or 'righteous' personality, is the ultimate arch-enemy of peace.[xxi]

In the protocol, you may ask the patient to think of anything having to do with pride. That is, you may request something along the lines of:
"Think of anything having to do with pride. Maybe it's your own pride, or maybe you are really aware of someone else's pride. Or maybe you are proud of something, or sense that someone else is proud of something."

III. Judgment

Phoenix, in her talk on "Doing Away With the Ego," warns that in her personal practice, she will not able to help her client if she forms a judgment about them. She also comments that if one is in judgment at all, then any kind of true sense (inner knowingness, intuition) is not accurate. All information gets filtered through one's judgment.[xxii]

According to Kabbalah Centre teachers Sarah Yardeni and Michael Moskowitz in their course entitled, "Creating Your Relationships," judgment is usually one of the major *Tikkun* – that is, it is something that one usually has to correct during his life on Earth.[xxiii]

In the protocol, you may ask the patient to think of anything having to do with judgment. That is, you may request something along the lines of:
"Think of anything having to do with judgment. It may be that you are judgmental of someone else, something or a situation – perhaps something you observed, read about in the news, or overheard. Or perhaps you feel that someone is being overly judgmental of you – you feel like you are being judged. Or maybe you are simply a witness to one of your friends or family members being judgmental over someone else or something that is totally unrelated to you."

IV. Anger

Kabbalah Centre teacher Michael Moskowitz, in his lecture "Spiritual Detox: Dispelling Anger," presents anger as the fuel that powers all reactive behavior. People use anger as something akin to a 'get-out-of-jail-free' card, as in "I'm sorry, I was angry." He notes that we get a quick rush of fleeting energy from anger, and underneath the feeling of anger is entitlement. Moskowitz informs his audience that the noted Kabbalist, The Ari, equated anger with idol worship. The Hebrew words for 'idol worship' literally mean 'strange work.' In this sense, idol worship is choosing to get your energy from anything other than a proactive Vessel for the Light: it is an inappropriate way to connect. Additionally, Moskowitz reports that according to The Ari, when a person gets angry, that person is open to all the negative unseen (energetic) forces.[xxiv]

Yogi Bhajan, PhD, in *The Mind*, comments that any form of anger – even hidden anger or ingrown temperamental anger, is the worst state of mind.[xxv]

In the protocol, you may ask the patient to think of anything having to do with anger. That is, you may request something along the lines of:
"Think of anything having to do with anger. Maybe you are angry about something or at someone. Maybe someone is angry at you. Maybe you observed someone's anger either on the news, on televison, or in the movies. Or maybe think of anger in general – whatever comes up for you."

V. Hatred

Hatred is separate from anger. For the purposes of The Emotional Equation technique, hatred may also be viewed as a more severe form of dislike. Hatred may stem from pride (Moskowitz notes that the extensions of the Ego are all interconnected and in theory it is difficult to separate one from the other[xxvi]). It may also serve to cover up our innate Love, instead of being an actual polarity.

"Think of anything having to do with hatred, or merely dislike. Maybe you hate or dislike or have ill feelings towards someone. Maybe you feel someone hates or dislikes you. Maybe one of your friends dislikes or hates another one of your friends. Maybe there is a situation, political or otherwise, that either you hate, or you sense hate."

The Levels (as presented by Dr. David Hawkins' Map of Consciousness[xxvii] and originally presented by Virginia Lloyd and further expanded by Dr. Hawkins)

Following the discovery of the component blockage which weakens the indicator muscle (as described in the procedure section), the practitioner will now determine which Level of Consciousness negates the weakness. Above the Level of Peace (600), it may be necessary to test in terms of numerical values instead of words/labels.

700-1000 Enlightenment
600 Peace
540 Joy
500 Love
400 Reason
350 Acceptance
310 Willingness
250 Neutrality
200 Courageousness – POWER/INTEGRITY BEGINS HERE (and includes all higher levels)
175 Pride – THIS IS THE HIGHEST LEVEL OF FORCE
150 Anger
125 Lust
100 Fear
75 Grief
50 Apathy
30 Guilt
20 Shame

Note: Dr. Hawkins uses a much more elaborate "map" with many elements involved. For further insights into his Map of Consciousness, please refer to his work, *Power Vs. Force*. *The Sedona Method™*, authored by Hale Dwoskin, utilizes these same Levels, presented as Emotional Stages of Freedom[xxviii] , as given by Virginia Lloyd to Lester Levenson, originator of The Sedona Method™, but does not include numerical values nor does it include the separate and distinct levels of Shame, Guilt, Neutrality, Willingness, Love, Joy, and Enlightenment. Dwoskin puts different emotional states, such as manipulative, frantic, horrified, reckless, and so forth, under each separate Emotional State, or Level of Consciousness as referred to by Hawkins.

Hawkins warns that the Levels of Shame, Guilt, and Apathy are seen in people with suicidal thoughts or tendencies[xxix]. The only three times this author has witnessed patients presenting at these Levels, the patients did indeed confirm that they had recently contemplated suicide. The practitioner may consider extensive treatment of the Emotional/Mental side of the Triad, as well as referral to a mental health specialist, such as a licensed clinical psychologist or psychiatrist. It should also be noted that these patients did not experience the suicidal thoughts again with continued treatment of the overall person using Applied Kinesiology procedures including, but not limited to The Emotional Equation.

The practitioner may choose to explain some of the basics of the Map of Consciousness or of certain Levels to the patient. Any Level below that of the numerical value 200, which is operating from Force as opposed to Power, causes a counter-reaction, as it is a law of Newtonian Physics that Force results in an equal and opposite counterforce. Operating from force also fortifies a Victim mentality, that is, everything is dependent upon external forces. Anything above 200 supports life and is constructive. Anything below 200 is destructive. Any Level below 250 leads to polarity and division. By the 500 Level, the happiness of others emerges as the primary motivating force.[xxx]

By operating at a higher Level of Consciousness, one will act with greater clarity. For example, this author, when operating at a Level of Love, had his wallet stolen, including a large amount of cash. An immediate check of Level calibration did not reveal any decrease in Level, but an hour later the Level had decreased to Reason (an application of the Emotional Equation raised the Level back to Love.). Instead of going into a state of frenzied panic, this author calmly plotted out a plan of action. There was no despondence at any point. Instead of experiencing victimization, this author took responsibility for being careless and having a certain amount of cash in his wallet. The main take-away is that despite slipping a Level, a positive attitude and clear Reasoning prevailed, as the original Level

was high to begin with. In a hypothetical example, someone operating at Neutrality may experience a traumatic event. Instead of slipping into Grief and engulfing oneself with sadness, this individual may slip into Courage, Pride, or Anger, and at least take some sort of positive action.

This author strongly advises a reading of Hawkins's *Power Vs. Force*, and at least the first part of Dwoskin's *The Sedona Method*™ for thorough discussion of The Map of Consciousness or The Stages of Emotional Freedom. A more in-depth explanation of each Level, as taken from Hawkins's *Power Vs. Force*[xxxi] and *The Eye of the I*[xxxii], as well as Dwoskin's *The Sedona Method*™[xxxiii] , is provided in this author's previously mentioned 2009 paper.

We meet what we mirror. In Guilt, we may blame someone else for their position in life. In Fear, that same person may seem menacing. At Pride, we may see this person as embarrassing or consider ourselves superior to him/her and treat him/her with disdain. In Neutrality, we may simply let that person be. In Reason, we might wonder how this person's situation occurred, if they have an interesting story, and we might be able to help. We can easily see that our experience of life depends not on what we experience but our state. If one's Level rises, then the potential for an enhanced enjoyment of life is boundless. At the higher levels, conflict is resolved by understanding and compassion, while at lower levels it is resolved by persecution and belligerence.[xxxiv]

As described later in the Step-By-Step Procedure, once the practitioner determines the Level of Consciousness, it is time to determine and treat the indicated acupuncture head point and Chapman's Reflex area. Have the patient **feel** the indicated Level. It is important to tell the patient, "it's more about feeling and less about thinking." In the case of the Level of Reasoning, the practitioner may wish to say something like, "Feel Reasoning. Imagine you are a great thinker, like Descartes or Aristotle."

Once the indicator muscle weakens, instruct the patient to think about the subcomponent. It is important to use the phrases, "if you were able to", "in this moment", "just for now", and "allow yourself to". This will allow to patient to grant him/herself permission to think about something, even if it produces discomfort. It also lets the patient know, that the "uncomfortable thinking" will happen just for a moment. When asking a patient to "allow him/herself" to do something, the patient is not made to feel as if he or she is thinking under orders, but will do so anyway because the patient has just given himself or herself permission to do so.

Once the patient is thinking in line with the indicated subcomponent, the weakened indicator muscle now strengthens again. At this point, find the acupuncture head point(s) that again weakens the indicator muscle (the patient still thinks about the component while feeling the Level). The practitioner may wish to use Pulse Points first and then confirm on the head, or simply challenge the acupuncture head points (or have the patient Therapy Localize them). Now have the patient therapy localize the correlated Chapman's Reflex areas (for organs of BOTH coupled meridians corresponding to the acupuncture headpoint) individually, and test each one looking for the indicator muscle again to weaken. If the headpoints for Triple Heater weaken the indicator muscle, test Thyroid (for Triple Heater) as well as Adrenals AND Reproductive Organs (for Circulation/Sex).

If the practitioner wishes to supplement the patient with flower essences, testing of floral essences (this author has used Flor-Alive and Bach) is appropriate after finding the acupuncture head point and Chapman's Reflex but before treating them. For a more detailed description of finding the indicated floral essence, see the procedure section. To this date, although specific flower essences correlate to certain thought patterns and processes, no definite correlations to specific Levels of Consciousness have been found. Test the flower essences against the indicated Level of Consciousness and not the indicated component. The indicator muscle will at first weaken when the patient feels the Level of consciousness (and does not think about the component), and then will strengthen upon exposure to the correct flower essence. Recommend to the patient usage of the flower essence for at least two weeks.

After recommending the appropriate flower essence(s), the practitioner once again instructs the patient to feel the Level and think about the subcomponent. As the patient thinks and feels, the practitioner taps the acupuncture head points (Beginning and End points may also be used; no significant difference has been seen in using the Beginning and Ending points as opposed to the simply the Acupuncture Head Points), and then performs IRT with the patient therapy localizing the Chapman's Reflex area.

The practitioner asks the patient to sit up, and the practitioner now has the patient therapy localize to the alarm points correlating to the Chapman's Reflex Area. If the points are bilateral, only one should present with positive therapy localization. The patient is not thinking or feeling, and the therapy localization will weaken the strong indicator muscle. At this point, the practitioner may choose to test nutritional supplements for strengthening of the indicator muscle while the patient maintains the therapy localization of the alarm point. This author chooses to test various teas instead. Tea, from both personal experience as well as feedback from patients, has both a calming and soothing effect (make sure the tea is caffeine-free), as well as CONTINUING to elevate the Level of Consciousness following treatment. The practitioner may tell the patient to consume the tea as soon as possible, and have several cups throughout the day as well as the following two days. There is a specific correlation between the teas and the alarm points. These are listed in the discussion of the alarm points and their corresponding affirmations, as found by Dr. John Diamond. This author has found that Triple Leaf teas and Celestial Seasonings have the greatest effect. It should be noted that this author has no affiliation nor receives any type of reward, financial or otherwise, for noting the usage of these brands of teas, or recommending them in clinical practice. They are simply and honestly the teas that were found to have the greatest effect, through trial and error, and kinesiological testing.

Once the practitioner finds the indicated alarm point have the patient recite the individual associated affirmations, as determined by John Diamond, MD, Ph.D. in *Life Energy.* One of the affirmations should strengthen the weakened indicator muscle. If none of the positive affirmations negate the weakness, then refer to the negative attitudes associated with that particular meridian, and ask the patient, " In your own words, what is the opposite of (name the negative attitude)." Now have the patient recite his/her own affirmation. For example, for the Bladder alarm point, if the indicator muscle does not strengthen upon any of the Bladder affirmations, use the opposite of a sample negative attitude, such as restlessness. Ask the patient "What would be the opposite of restless?" If the patient says, "Still," then have the patient recite, "I am still." The practitioner should proceed in this manner until he or she finds the appropriate affirmation.

Have the patient silently repeat the affirmation, while one hand therapy localizes the alarm point, and the other hand covers the forehead so as to therapy localize both the emotional neurovascular points. This is similar to Dr. Scott Walker's Neuro-Emotional Technique. Please note that we use the ALARM points, and affirmations provided by Dr. Diamond's *Life Energy.* With the patient in position and silently reciting the affirmation, tap the transverse processes of the vertebrae indicated by Dr. Victor Frank's *Total Body Modification* Sequence patterns, also employed by Dr. Scott Walker's *N.E.T.* Tap the transverse processes using either fingers, a double-pronged activator, or an instrument such as the Arthro-Stim by IMPAC. Tap with the patient in neutral respiration, inhalation, and exhalation, in a similar manner to technique employed by *N.E.T.* and its predecessor, *Total Body Modification.*

Life Energy Alarm Points and Affirmations, from Dr John Diamond's *Life Energy*[xxxv] and associated Teas and Victor Frank *TBM* Sequences[xxxvi]

(Note: This author highly recommends a thorough reading of Dr. Diamond's *Life Energy* in order to fully grasp all concepts instead of merely looking at an outline).

BILATERAL MERIDIANS

LUNG

Negative	Positive
Disdain	Humility
Scorn	Modesty
Contempt	Tolerance
Haughtiness	
False Pride	
Intolerance	
Prejudice	

POSITIVE AFFIRMATIONS:

I am humble.
I am tolerant.
I am modest.

Sequence: Left: T1, T8, L2; Right: T2, T9, L3
Teas: White Tea, Cold/Flu Teas, Sugar Balance Tea, Ginseng, Horny Goat Weed

LIVER

Negative	Positive
Unhappiness	Happiness
	Cheer

POSITIVE AFFIRMATIONS:

I am happy.
I have good fortune.
I am cheerful.

Sequence: T2, T5, T8
Teas: Liver Detox Teas, Horny Goat Weed, Cholesterol Reducing Teas, Ginseng

GALL BLADDER

Negative	Positive
Rage	(Reaching out with) Love
Fury	(Reaching out with) Forgiveness
Wrath	Adoration

POSITIVE AFFIRMATIONS

I reach out with love.
I reach out with forgiveness.
I come forward with love and forgiveness.

Sequence: T4
Teas: Liver Detox, Ginseng, Horny Goat Weed

SPLEEN

Negative	Positive
Anxiety about future	Faith (about the future)
	Confidence (about the future)
	Security

POSITIVE AFFIRMATIONS

I have faith and confidence in my future.
I am secure.
My future is secure.
I have faith and courage in my future.

Sequence: T1, T5, T9
Teas: Echinacea/Cold/Flu Teas, anything dealing with Immune support, Horny Goat Weed, Sugar Balance, Ginseng, Green Tea

KIDNEY

Negative	Positive
Sexual Indecision	Sexual Security/Assuredness

POSITIVE AFFIRMATIONS

I am sexually secure.
My energies are balanced.
All of my energies are balanced. (Note: These last two affirmations have been modified from the original affirmation as listed by Diamond In Life Energy: "My sexual energies are balanced.")

Sequence: T1, T5, T8
Teas: Liver Detox, White Tea, Blood Pressure Teas, Ginseng, Horny Goat Weed

LARGE INTESTINE

Negative	Positive
Guilt	Self-Worth
Obsessional thinking	

(Note: While Diamond does not list Obsessional thinking as a negative emotion, he mentions "People who feel guilty tend to be obsessional."[xxxviii])

POSITIVE AFFIRMATIONS

I am basically clean and good.
I am worthy of being loved.

Sequence: L5
Teas: Colon Cleanse, Detox, Ginseng, Sugar Balance Teas, Ginger

MIDLINE MERIDIANS

CIRCULATION-SEX

Negative	Positive
Regret and Remorse	Renunciation of Past
Sexual Tension	Relaxation
Jealousy	Generosity
Stubbornness	Kindness

POSITIVE AFFIRMATIONS

I renounce the past.
I am relaxed. My body is relaxed.
I am generous.
That is done. It is the past. I will let it go and move on in the present.
My mind is wholly disconnected with things of the past.

Sequence: T7, T9, T11
Teas: Blood Pressure/ Teas, Vitality, Horny Goat Weed, Ginseng, Relaxing Teas,

HEART

Negative	Positive
Anger	Love
	Forgiveness

POSITIVE AFFIRMATIONS

I love.
I forgive.
There is forgiveness in my heart.

Sequence: T2, T8, T12
Teas: Blood Pressure, Horny Goat Weed, Ginseng

STOMACH

Negative	Positive
Disappointment	Contentment
Disgust	Receiving Enough
Greed	Having Enough
Bitterness	Tranquility
Emptiness	
Deprivation	
Nausea	
Hunger	

POSITIVE AFFIRMATIONS

I am content.
I am tranquil.
I have enough. What I have is sufficient.

I am thankful for what I have now.
I am thankful for having enough now.
I am enough.*
I have enough.*
I am satisfied.*
(* added by this author)

Sequences: T8, T10, T12
Teas: Digestion, Sinus Congestion, Ginger, Sugar Balance

THYROID/TRIPLE HEATER

Negative	Positive
Depression	Elation
Heaviness	Lightness
Despair	Buoyancy
Grief	Floating
Hopelessness	Hope
Despondency	
Loneliness	
Solitude	

POSITIVE AFFIRMATIONS
I am light and buoyant.
I am buoyed up with hope.
I am hopeful.*
I am lifted up by hope.*
(* added by this author)

Sequence: C1, C4, C7
Teas: Green Tea, Vitality, Ginseng, Horny Goat Weed

SMALL INTESTINE

Negative	Positive
Sorrow	Joy
Sadness	

POSITIVE AFFIRMATIONS
I am full of joy.
I am jumping with joy.
I am lifted up with joy. *
(* Added by this author)

Sequence: L5
Teas: Detox, Sugar Balance Teas, Ginger

BLADDER

Negative	Positive
Restlessness	Peace
Impatience	Harmony
Frustration	Patience
	Serenity
	Calm

POSITIVE AFFIRMATIONS

I am at peace.
I am in harmony.
Dissonances and conflicts within me have been resolved. I am balanced.

Sequence: L5
Teas: White Tea

GOVERNING VESSEL

Negative
Embarrassment

No affirmations listed. Have the patient make up his or her own affimations based on the opposite of the negative attitude.

Sequence: T3, T6 (from Dr. Scott Walker, N.E.T)

Teas: Gingko

CONCEPTION VESSEL

Negative
Shame
Shyness

No affirmations listed. Have the patient make up his or her own based on the opposite of the negative attitude.

Sequence: T3, T6 (from Dr. Scott Walker, N.E.T)

Teas: Gingko

Following the entire procedure (which despite the length of this paper, should only take about 3-5 minutes, if that), the practitioner may choose to use *N.E.T* procedures to determine if there were precipitating events in the patient's life that helped to form concepts that cause current perceptions. For greater detail, please contact *N.E.T* at 760-944-1030.

When to Use:

Dr. Walter Schmitt and Dr. Kerry McCord, in their *Quintessential Applications of Applied Kinesiology* Protocol, put the step of treating the emotional/mental component towards the end of their protocol, following all treatment

for the organs, but just before dealing with any fascial elements or the actual vertebral or extra-spinal adjustment. However, in this same protocol, the "emotional step" may be performed while correcting cranial-sacral flow disturbances, if it is indeed found that emotional stressors are primary and are playing a role in the dysfunction of the cranial-sacral mechanism and/or the immune system . In either case, correcting neurological injury patterns, neutralizing histamine, allergy, and/or sensitivity reactions, and improving neurotransmitter function should be performed prior to any type of emotional treatment. If a histamine reaction is not neutralized prior to treating emotional factors, deleterious effects, including greater stressful feelings, may occur. For further elaboration of their recommended protocol, please refer to the *Quintessential Applications of Applied Kinesiology* manual or Recorded (video) lectures, available from Applied Kinesiology Study Program. As Dr. Schmitt notes in his newsletter, *The Uplink,* the "emotional correction" is "NOT an optional step."[xliii]

The practitioner may choose to perform other Emotional Techniques prior to using The Emotional Equation, depending on the desired length of the treatment session, and the desired portion of the treatment visit devoted to the Mental/Emotional Side of the Triad of Health. This author first checks for and performs Dr. Victor Frank's General Emotional Treatment and Paged Emotions[xliv], followed by either The Emotional Recall-Quick Fix using Representational Systems as outlined by this author's paper of that title in the *2008 Annual Proceedings of the ICAK*[xlv] and perhaps exploring the patient's main stressor(s) using the techniques described in my paper in the *2010 Proceedings of the ICAK*, "Emotional Equation Supplements: Neutralizing Deep-Rooted Emotional Charges From Past Relationships and Feelings of Victimization" as well as my paper in the 2011 Proceedings of the ICAK, "Emotional Equation Supplements: Neutralizing the Underlying Factors of Unwanted Emotions." This author also will utilize colored glasses and tuning forks, as well as check the Four Walls of Judgment as described in my paper in this same (2012) *Proceedings of the ICAK.*

This author then utilizes The Emotional Equation as the very last step of treating the emotional/mental side of the Triad of Health. At the very least, if time is a factor, this author will check and perform the General Emotional Treatment by Frank, followed by The Emotional Equation. Following utilization of the Emotional Equation, and other facets of a treatment session, this author may conclude with 72 Names gazing and meditation described in another paper in this very *2012 Proceedings of the ICAK*

<u>Step-by-Step Procedure:</u>

1. Patient is supine. Practitioner finds a strong indicator muscle, preferably the Pec Major Clavicular. The straight-arm test, as used in N.E.T. may also be used. If the straight-arm test is utilized, the practitioner places his hand on The Thymus, or Heart Chakra. If the Pec Major Clavicular muscle is utilized, the patient therapy localizes The Thymus, or Heart Chakra. In either case, the muscle remains strong. (Note: This author, in other cases, does not favor the straight arm test. However, this author favors the straight-arm test when using the Emotional Equation as it enables the non-testing hand to connect to the patient's Thymus, or Heart Chakra.
2. The Practitioner slowly sounds off the Equation: "Truth is equal to Love plus Awakening plus Compassion plus The Will plus The Ego," and performs a muscle test at the mention of each component (Love, Awakening, Compassion, Will, The Ego). Strong indicator muscle weakens at one of the mentioned components.
3. Continuing with this position and manner of testing, the Practitioner then names the subcomponents and muscle tests each one. For example, if the patient's strong indicator weakened at the mention of Ego, then the practitioner will then proceed with: Control, Pride, Anger, Judgment, and Hatred. Order is not important. Now repeat the subcomponent again and test the indicator muscle just to affirm weakness.
4. Practitioner now reads off The Levels of Consciousness, starting from the lowest Level – Shame. The indicator muscle will continue to weaken until the correct Level of Consciousness is found (Apathy, Grief, Fear, Lust, and so forth). It is at this indicated Level where the "stuckness" or block occurs.

5. Pause for a couple of seconds. Now repeat the Level of Consciousness and the indicator muscle should test weak. At this point, the practitioner may choose (or not choose) to test for strengthening using flower essences. More than one flower essence may be found. Patient should take suggested flower essence(s) on his or her own for two weeks or until next visit.
6. Pause for a few seconds. Practitioner now asks patient to FEEL (not think about) the Level of Consciousness. For example, if the Level of Consciousness indicated is Love, the Practitioner asks the patient to feel love, or loving. If the Level is more abstract, such as Reasoning, the Practitioner may ask the patient to feel Reasoning, as if he or she was a great philosopher or thinker, like Descartes, Aristotle, or Einstein. In the case of Neutrality, the Practitioner may ask the patient to feel neutral, as if everything, JUST FOR THIS MOMENT, is uncharged. When the patient feels correctly, the indicator muscle should again test weak.
7. Practitioner then asks the patient to THINK ABOUT the indicated Equation component while he/she FEELS the Level. Make sure to let patient know that at no point will you ask or try to figure out what the patient is feeling. This allows the patient complete freedom of thought. Also make sure to let the patient know that this thought is just for the moment. If the patient does not want to think about it, he or she is comforted in knowing that he or she can drop the thought in a moment. For example, if the patient tested for the Level Love as well as the component of Ego: Judgment, the practitioner may say, "Just in this moment, As you continue to FEEL ANGRY, please THINK ABOUT ANYTHING PERTAINING TO JUDGMENT: A JUDGMENT YOU MAY HAVE ABOUT OTHERS; OTHERS JUDGING YOU, OR JUDGMENT IN GENERAL. Just so you know, as no point will I ask you or attempt to figure out what you are thinking. Let me know when you have the thought in mind." Note: When asking the patient to think about the component, let the patient know that it may be specific to someone or something, or it may be in general. It is whatever it means to that patient. In most cases, the patient will actually think about a current pressing issue. When the patient has the correct thought block pattern, the muscle weakness will be negated and the muscle will once again test strong.
8. At this point, the organ and correlated Acupuncture Head Point as well as Neurolymphatic (Chapman's Reflex) Area is found. While patient is still feeling the Level and thinking the Thought, the patient can Therapy Localize the different acupuncture head points bilaterally to see which one(s) cause the facilitated muscle to weaken again. Once the point is found, determine laterality. Continuing with our example, the patient feels love/loving and the indicator muscle weakens. The patient, while trying as best as he or she can to feel love/loving, thinks about judgment (someone judging him/her) and the muscle now tests strong. The Doctor now has the patient therapy localize to the different acupuncture points until a point, in this exmple we will use LI 20, is found to make the muscle go weak again. The doctor has the patient independently therapy localize the right and left LI 20 points, respectively, checking for weakening of the indicator muscle.
9. Patient therapy localizes neurolymphatic (Chapman's Reflex) points correlated to coupled meridian acupuncture head points until one point is found that once again weakens the weak indicator muscle. Test BOTH Organ Neurolymphatic Points. For Triple Warmer meridian, test Thyroid NL point. For Circulation-Sex meridian, independently test adrenal NL points as well as reproductive organs NL points. Using our example, the doctor will have the patient independently Therapy Localize the Large Intestine and Lung Neurolymphatic points, bilaterally. Only one of the two sets of organ points will cause weakening of the indicator muscle. The doctor will now rest the patient's hands on the indicated neurolymphatic point(s). If only one Neurolymphatic area is indicated, such as the Heart, the patient puts both sets of fingertips on that one area.
10. The Practitioner instructs the patient to continue feeling and thinking. The Practitioner has a choice of tapping the acupuncture head points bilaterally, or tapping the Beginning/End Points on one side only. Neither option has appeared to hold a significant advantage over the other in recent tests. The practitioner taps acupuncture head point(s) 120 times while patient continues to feel the Level, as well as think the blocking thought/Component, and therapy localizing the indicated NL areas. In our example, the practitioner taps the LI 20 points bilaterally, or the B/E points of the Large Intestine meridian on the head and hand of the indicated side only, while the patient therapy localizes the Large Intestine Chapman's Reflexes on the

bilateral lateral thighs.

11. Practitioner performs IRT to NL Point/Chapman's Reflex area simultaneously while patient continues to feel the Level and think the Thought. Note: If patient has trouble doing both simultaneously, have them feel the Level first, and then think the thought (component).
12. Practitioner moves patient to a seated position and affirms a strong indicator muscle. The patient Therapy Localizes the alarm point(s) that correspond to the Chapman's Reflex area and the practitioner checks for weakening of the indicator muscle. If there are bilateral alarm points, test each point independently. In our example, the patient would therapy localize first to the Right (does not matter which side is tested first) Large Intestine alarm point and check for weakening of the indicator muscle, and then the Left Large Intestine alarm point and check for weakening of the indicator muscle.
13. If the Practitioner wishes to, Teas and Supplements may be checked now. The indicated Tea or Supplement is that which causes the weakened indicator muscle (while patient maintains contact with alarm point) to test strong.
14. Squirt some water in the patient's mouth to negate any effects of the Tea/Supplement testing. As the patient continues to Therapy Localize the alarm point which caused weakening of the indicator muscle, the practitioner has the patient recite the Life Energy Affirmations as the practitioner tests for strengthening of the weak indicator muscle following each affirmation. This is performed in a "repeat after me" format. In our example, with the patient Therapy Localizing the Left Large Intestine Alarm Point (which caused the indicator muscle to go weak), instruct the patient to "repeat after me", and then recite the following affirmations, testing the indicator muscle after each affirmation is spoken:
    " I am worthy of being loved."
    "I am loveable."
    "I am basically clean and good."
    "I am basically clean and pure."
15. Upon finding the affirmation that negated the weakening caused by the Therapy Localization of the indicated alarm point, instruct the patient to keep his or her contact on the alarm point, and in a manner similar to that of Dr. Scott Walker's Neuro-Emotional Technique[xlvii], the patient puts the palm of the free hand on his/her forehead, encompassing the emotional Neurovascular points. The practitioner instructs the patient to SILENTLY REPEAT the affirmation found in the last step. In our example, the patient would have one hand Therapy Localizing the left Large Intestine alarm point, while the other hand Therapy Localizes the entire forehead (with the intention of covering both emotional Neurovascular points). The practitioner instructs the patient to now "Silently repeat, 'I am worthy of being loved. I am worthy of being loved. I am worthy of being loved,' over and over again."
16. While the patient is holding both the points on the head and body and reciting the affirmation silently, the practitioner, again in a manner similar to that of Dr. Scott Walker's Neuro-Emotional Technique[xlviii] as well as Dr. Victor Frank's Total Body Modification , using either his/her hands, a double-tipped activator instrument, or an IMPAC Arthro-Stim, stimulates Dr. Frank's TBM Sequence points on the Transverse Processes which correspond to that organ. Stimulate first while the patient's breath is neutral, then again while instructing the patient to breathe in, and again while instructing patient to exhale. In our example, the doctor would "adjust" the L5 transverse processes upon neutral breath, inhalation, and then exhalation by the patient while the patient silently recites the affirmation of "I am worthy of being loved."
17. If the practitioner wishes to investigate further, he or she may use investigative techniques used in Neuro-Emotional Technique, in order to find out if there were precipitating events in the patient's lifetime that lead to the block at the indication affirmation. In our example, the patient may ask the body if this "Not worthy of being loved" is the original concept, or if there is was a more original concept. Not wanting to represent Dr. Walker's original work and claim it as my own, please refer to seminars and manuals by Dr. Scott Walker and *Neuro-Emotional Technique (N.E.T)*.

18. Retest simply for the Level of Consciousness. Using a strong indicator muscle, simply read off the Levels of Consciousness as performed in Step # 5. Only this time, the strong muscle will go weak. Do not tryto further raise the Level of Consciousness. Over-performing this technique will overly inhibit the amygdala. Allow the body and person with the body to process and integrate the corrections. It is common for the patient to increase by one or two Levels in the "Force" Levels, and one full Level from Courage to Joy. Starting at Peace (600), numerical values in increments of 10 points may be tested. Following 850, numerical values in increments of single points may be tested. As the values of the Levels are logarithmic and not arithmetic, as described by Hawkins , the numerical increases decrease at higher Levels, yet have an equal, if not greater, effect.
19. Let the patient know that sometimes the effects are not immediate. The patient may feel very subtly more grounded, balanced, relaxed, and/or lighter immediately, but should really notice the effect in about 20-30 minutes. Inform the patient that as he or she now experiences a higher level of consciousness, he or she may feel lighter or even more energetic or happier. The result is unique to each Level, as well as to each individual. Instruct the patient to enjoy the recommended tea, supplements, and/or Flower Essences as soon as possible. In the case of Teas and Flower Essences, a continued raise through the Map of Consciouness may be experienced. For Flower Essences, take the recommended amount as supplied by that company. (For example, Flor-Alive recommends 40 drops per day). Using teas, the patient may continue to drink the teas one after another and will innately know when to stop. Please keep the teas caffeine-free. The teas need only be consumed for a few days.
20. The practitioner may instruct the patient to supplement his or her Awakening in various ways. In addition to the teas, the practitioner may recommend meditation, any type of meditative yoga (this author practices Kundalini Yoga and has found it to provide an excellent adjunct), as well as The Sedona Method™, which helps the patient to actively let go, or release, aberrant thought and belief programs that are slowing down the body's hardware. The patient may even choose to work on releasing whatever thought patterns or affirmations were found in the office visit.
21. This technique may be used more frequently (every other day) in cases of extreme stress or with patients at lower Levels. From Courage – Joy, the technique may be performed once or twice per week. For the Levels of Peace and above, perform once per week or per two weeks. A person's perspective changes at each level, and too great a change in too short of a time period may be too much to handle. For example, once I achieved 700, I temporarily "shut down" in the social realm, as I was now acting out of a state of Non-Duality, and related to people as well the Universe, much differently.

Table 1 (located on TABLE page) shows the results of hip flexor ROM (patient supine) of four random patients, all four female, who were treated consecutively. Measurement of ROM was taken visually with the examiner passively flexing the supine patient's leg at the hip.

In the findings, there is an increase in ROM measurements bilaterally, including an establishment of greater symmetry. In the first case, there is an elimination of pain and tightness. While these examples show the release of tension and neurological re-organization in linear terms, what is of greater importance is the non-linear benefit that can be communicated but not measured. Here are several such examples (names withheld due to current HIPPA regulations):

"It's amazing. I am feeling much more relaxed...I was stressing about all of the bills I have and since I don't have health insurance- all the bills from that...BUT I am excited b/c I might get a much more lucrative job with benefits so I am thinking positive" – from an email

"My old stressors don't seem to bother me. I feel very neutral, clear, calm, and my mind is relaxed." – from an email

"Just thought you would like to know that I had one of the most wonderful days ever Sunday, and I am usually dragging around that day. Monday came and I noticed that I was not able to think some of my old favorite thoughts, like worrying about certain situations, and being bothered by others. For many years I have done a lot of emotional healing, so I know what it is to clear something and how it feels to let it go, permanently. Your work has the same ability to get rid of those old feelings and produce a more positive state of being. It is very exciting." – from an email

"Shortly after I left your office, I developed a very warm, loving feeling. That evening, I re-fell in love with my husband, who I had previously viewed as simply a roommate all of these years." – from a text message

"At first my husband didn't know what to make of what you do in the office. Then he noticed how I am calmer and more pleasant since seeing you. Now he always encourages me to come see you!" – from a patient (verbally spoken)

"As you are going through what you do, I feel all the stress and tension just kind whoosh right off of me. Whoosh, whoosh, whoosh, and I am really centered and grounded afterwards." – from a patient immediately after treatment.

"I feel light and so purely happy. I see that I'm radiating good energy. I truly enjoyed this afternoon." – a text message from a patient seen that afternoon

CONCLUSION

Utilization of The Emotional Equation brings a new facet to the emotional side of the Triad of Health in that it results in an elevation in the Level of Consciousness and a change in overall thought process, as opposed to simply negating the negative effects of a current or past stressor. The addition of a fifth component serves to allow for greater ascension of the Levels of Consciousness. Further studies involving a greater number of measurements taken, testing for the facilitation of inhibited muscles, as well as subjective measurement of stress level by the patient need to be performed. Additionally, acupuncture head points often involve eye movement patterns, which after comprehensive research and investigation, may be tied in to the overall treatment.

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TABLES

Table 1

Right = Right Leg; Left = Left Leg;

Note: In trial #1, the patient reported pain and tightness in the left hamstring immediately preceding the Emotional Equation technique treatment. During the ROM test immediately following the Emotional Equation technique treatment, the patient reported the pain and tightness were no longer present.

	Baseline ROM	Post Technique ROM
1. Right	90 degrees	95 degrees
Left	80 degrees	95 degrees
2. Right	90 degrees	105 degrees
Left	95 degrees	105 degrees
3. Right	100 degrees	115 degrees
Left	105 degrees	115 degrees
4. Right	85 degrees	105 degrees
Left	90 degrees	120 degrees

Communicating with the World of Frequency…
Therapy Localization and Challenge Techniques Test the Accuracy of Frequency as a Diagnostic Method

George Koffeman, D.C., DIBAK, Co-Author, Sound Script Therapist and Typist:
Melody Long Anglin M.M., S.S.T., C.T.H.P.

ABSTRACT:
DOUBLE HYPOTHESES

1. Defined frequency provides insight or diagnosis as to the body's area of need.
2. Frequency itself can support and or treat the area of need without manipulation.

Key Indexing Terms: We are using two disparate languages – that of music and of medicine. *The Sound Prescription*® is a term owned by Harmonious Life and Health Research and is synonymous with the process described in our research. A Sound Script Therapist (SST), is the musical therapist who is qualified to test for the RTOT (Requested Tone with Overtone Reinforcements - also called the Frequency Key) and is certified to play the energetic musical composition the body requires. Toners in this field as referenced by Harmonious Life and Health are musical therapists who are not qualified to play compositions but may find the Frequency Key or RT (Requested Tone). This Study was done with a fully certified Sound Script Therapist who tones, plays and interprets the tone and key.

The construct of the research from a medical viewpoint is in the foundations of vibratory medicines known as: Homeopathy, Acupuncture, Reflexology, IVF (inter-vertebral foramina) and AK.

The construct of the research from the Sound Script Therapist Melody Long Anglin's vantage point contains the above sciences and adds the Science of Musical Sound along with the terms: RT (Requested Tone), fundamental, frequency, note, pitch, tone, Frequency Key (all are interchangeable); OT (Overtone Reinforcement) – the use of 5 to 7 octaves of overtones while applying the fundamental. Definition of the fundamental delineates chakra territories and anatomical locations for body diagnosis. The Sciences of Cymatics, Acoustics, Acupuncture, Chakra Territories, Reflexology, Psychology and Chromo Therapy serve as precedents for this vibratory process.

INTRODUCTION:
After dedicating a lifetime to AK, it seems strangely fitting that at the age of 90 I am alive to see something else that sparks my interest like the foundational years when I, along with a small group of doctors, were privileged to work beside Dr. George Goodheart as we founded the College of AK.

In 2010, through a mutual acquaintance who shared positive results from a method of vibratory healing therapy with the harp, I was introduced to harpist and Sound Script Therapist, Melody Long Anglin, a consummate musician, symphonic harpist, lyric coloratura soprano, and composer with Harmonious Life and Health Institute.

I attended one of her concerts then decided to investigate her therapeutic method further. She kindly explained to me many details of her work including the two hypotheses above. Because of her accomplishments both musically and educationally, I did not take lightly her investigations of vibratory medicine. I set up an afternoon with her and two other Chiropractors who were also Kinesiologists to see and experience *The Sound Prescription*® her definitive form of vibro acoustic therapy.

Upon Melody's arrival, we were using AK to locate body weaknesses in advance of the Therapy. We planned to test the first hypothesis (defined-frequency can point to the area of need). We wanted to know, in advance, the

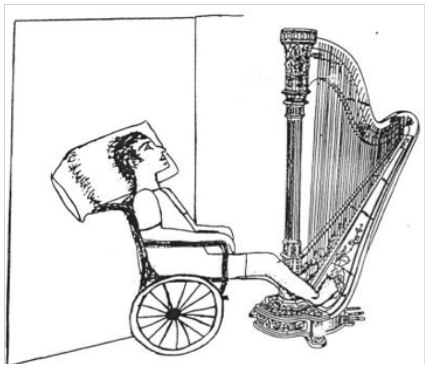
area needing therapy to see the efficacy of the test. On this particular day we had not found body weaknesses yet. Rather than make Melody wait for our exam we told her. Melody suggested we let the frequency find the body's need. We were skeptical but agreed.

After toning each of us (a testing process done to discover body frequency), she reported the frequency level, translated that to a chakra level, reported the level to us as a vertebral level and asked us to Therapy Localize (TL) and Challenge it on the body to confirm or disprove the body's coordinates for repair as found by the frequency. In each case, the frequency localized the point needing therapy – a straight pointer to it. Then each doctor received, *The Sound Prescription.* Afterwards, the areas of weakness were re-measured. In each case, a successful adjustment had taken place under Musical Vibration and with no physical manipulation – the TL points all cleared. Was this possible? I felt further investigation was necessary and a study was put underway.

PROCEDURE:

I. Find the client's Frequency Key. This is determined by the patient feedback to the therapist. By placing the feet of the client on the soundboard of the harp, the harpist palpitates the 7 fundamental tones one at a time. Each tone will resonate in a different part of the body. The Sound Script Therapist traces the readings onto a graph of the human body as reported by the subject. The tone that goes the farthest up the body and stays the longest is the Requested Tone (RT) or Frequency Key.

Figure provided from HLH archives



II. Translate the Frequency Key into its vertebral level and the IVF Factors contained in the compartmentalized area. This compartment marks the chakra the body is most active in at the time. Its reading provides the subject and practitioner with the area the body is presently working and allows the practitioner and subject to begin a focused search to find the reason if any, for the body's activities.

III. Test the Requested Tone (RT)/ Frequency Key at the vertebral level with Applied Kinesiology to verify the diagnostic location of a fixation, subluxation, etc.

The musician used the Chakra Chart of Musical Values as related to the vertebral, visceral, neurological, psychological and hormonal systems to communicate the proper systems for testing. Our easiest start was translating pitch and chakra through the Meric Chart of Vertebral Levels.

Testing Process:

A. Muscle Testing for postural integrity

B. Therapy Localization (TL)

C. Challenge

NOTE: Steps I-III bare the burden of proof for Hypothesis #1: Defined frequency provides insight or diagnosis as to the body's area of need.

IV. Return the client to the harp for vibration support using the Requested Tone (RT) / Frequency Key and its Overtone Reinforcements (OT). Timeframe of 7-8 minutes of Sound Script Therapy (SST) was allowed. This is defined as – an individual musical composition played on the fundamental with Overtone Reinforcements (RTOT) as prescribed by *The Sound Prescription®* .

The entry pitch, Requested Tone (RT) or Frequency Key, is used to assess where the body is working at the time. It also provides a diagnostic readout to a physician that is normally not available through any other means. The energy impulses of the harp's vibrations enter the feet of the client. The foot is used because reflexology tells us all-body-

systems are represented in the feet. The tone then travels up the body, through the bone, muscle, nerve tree and water in the body creating a sweeping effect and an entrainment effect between body and tone. As the playing goes on, participants in general feel the music rise through the body higher and higher. Others who are "closed" at first, get only a great foot massage. However, the frequency is a communication device with nourishment and energy that "targets" a body system regardless of the traveled height.

V. Re-test. After *The Sound Prescription* is applied we re-test the client with AK to ascertain if any changes were made by the SST (Sound Script Therapy).
NOTE: Steps IV-V bare the burden of proof for Hypothesis #2 Frequency itself can support or treat the area of need without manipulation.

DISCUSSION:
Each of the participants went through the same procedure above. As we know, AK evaluates the majors and minors of the old Meric System, and we use the processes of diagnostic or analytic methods such as TL (Therapy Localization) and Challenge. This seemed to take place in frequency as well only the Sound Script Therapist (SST) called the levels primary, secondary and tertiary rather than majors and minors and charted the graph of frequency heights for diagnostic.

By definition, *The Sound Prescription* uses a toning process to discover the frequency the body is open to at the time. The single most important pitch is measured by one that vibrates the farthest up from the foot to the head; lasts the longest and is comforting to the patient. This height and length of stay become the analytic method of Sound Script Therapy to choose the RT (Requested Tone).

In *The Sound Prescription,* frequency vibrates up through the body releasing the localization of stress. In so doing the muscles affected by that stress balance. The accuracy of the pitch choice and its ability to cooperate with the body for wellness were consistently amazing. The Sound Script Therapist called this toning process her MRI or CAT Scan. Further, she envisioned that the usage of frequency to assist physicians to diagnose was the primary purpose of the work she does, thus the title The Sound Prescription. For subjects where, "what to do" is not clear, the possibility of a more precise "order" of assistance could make the difference between recovery or not, especially wanting to test the "order" of action for a person in a plateau whose progress has ceased. Finding the RT (Requested Tone) translates into a major or primary concern – A body message of "work here first" and supplying an order to things.

The Sound Script Therapists does not need to be a physician nor apply a physical exam. The *Sound Prescription*® as taught by Harmonious Life and Health insists that the body speaks in frequency as a language. The discoveries and discussions of it are available through Harmonious Life and Health, so that a physician may use his medical knowledge to "communicate with the body," "listen to the body," and find a course of action that is correct for the body.

In this study, minors or secondary's were not considered because of the narrowness of the study. However, sometimes vertebrae outside of the primary area were considered because of the rainbow effect (ie. the overlapping of chakra segments). In this study, all segments within the first Frequency Key and overlap responded in nearly every subject. Having extra time between subjects one day, we did the study process twice in one hour on one person to test the body's ability to orchestrate the "Order of Treatment" through the Requested Tone. This extra look at the body allowed us to see the change in the body graphing after the first treatment. We were able to see a new Requested Tone (RT) and compare the first graph to the second graph to verify change had occurred on a frequency level and a new focus had been made by the body.

Here is a complete overview of this client with 2 Sessions in a row:

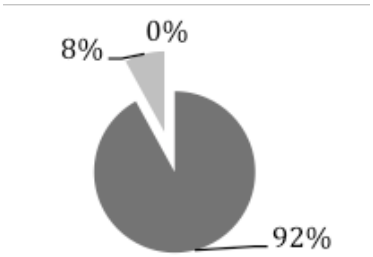
1. We followed the same diagnostic procedures above to locate the Requested Tone (RT).
2. The body area that correlated with the tone was: C-3,4,5,6,7 and T-1.
3. We found C-3 right and T-1 left to right.
4. *The Sound Prescription* was applied.
5. Both C-3 right and T-1 left to right, cleared.
6. We did a SECOND toning with the same procedures to locate the RT. We found the body's focus had moved to a New RT (Requested Tone) which was expected. We decided to allow a secondary region to be included musically in this next test because the Chakra Chart of Musical Values showed the secondary very clearly.
7. Findings were: Atlas fixation right, Axis fixation left (PRIMARY). L-3 was found left, L-2 left, T-10 left, T-9 left, T-8 right (SECONDARY). This may have been there before, but our protocol was to follow the body's lead – We did not address this until the body reported it as "ready for change." We will use the body's direction of "treat this first" in the musical composition to be applied.
8. *The Sound Prescription* was applied to the New Requested Tone (RT) and Overtone Reinforcement (OT) was added to support the areas. NOTE: This type of improvisational playing takes much skill and thought on the part of the Sound Script Therapist who maintains a 5-7 octave ring for 4 minutes per area for a total of 8 minutes therapy time. The order of treatment and musical composition are completely dictated by the body.
9. Upon the final examination with use of TL and Challenge. I found ALL lesions cleared in the second session's Primary but only 4 of the five Secondary locations cleared. Secondary level T- 10 did not clear.

We thought this interesting, so I added another measurement of emotional testing and discovered the subject responded positively to emotional stress, "I don't wanna but I gotta." Did that block the completion of treatment? (See Stress Testing by Elmer Couseneau). The Sound Script Therapist felt the T-10 would eventually respond to the changes that cleared in the 8 vertebrae above and below it and was satisfied to see a total of 8 body changes in this client's therapeutic event. Though not discussed in this study (due to the narrow scope of our reporting), We also had knowledge of the Before and After Forms where pain and stress levels for subjects were taken. In the case of this double-session subject, on a scale of "0 to 10" , the subject had come in reporting a pain level of 5 and left reporting a level of 1. However, since it was not a complete clearing in both sessions, we both agreed to classify it as a failure in our 50. Though the subject was fully successful in the first random test and with all primaries, she became one of our failed subjects because we did not know how to fairly separate the data.

Another interesting client was one lady who received the same protocol but the body seemed to not accept the change. Since this was about our 49th participant, both I and the SST (Sound Script Therapist) thought it was out of character for the Frequency. I decided to apply the Temporal Tap on the right side because she was Right Hemisphere Dominant. Once that was done the body accepted the changes and cleared itself. However, she was also counted as a failure due to the fact that the frequency did not achieve without intervention of touch – which was the protocol – to see if "Defined Frequency" could make a change without manipulations.

OVERALL RESULTS

The overall result of frequency to point to the lesion most ready for corrections was astounding. It provided our data to Part I of the double hypothesis, "Defined Frequency provides insight or diagnosis as to the body's area of need." Part II of the hypothesis, "Frequency itself can support or treat the area of need without manipulation," was also effective within the 90th percentile.

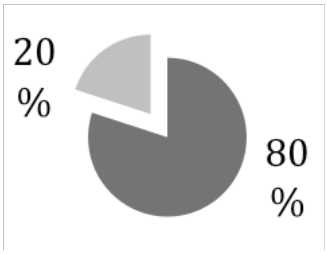


Over-all: In a random field of 50 participants as verified through AK procedures elicited by TL and Challenge, 100 % presented with subluxations, fixations, neuro muscular or lymphatic reflex lesions as found in the frequency diagnostic's confined area. Out of this number 92% experienced clearing of the lesions after Sound Script Therapy, 8% did not.

PSYCHOLOGICAL REVERSAL

Since the protocol of this study is very narrow we did not do adjusting techniques to undo the reversal save in one case. We allowed them all to stay reversed to see what happened after therapy but checked posterior, anterior, left and right to be certain of our analysis. We soon found that the determination of Psychological Reversal was of no consequence to the frequency especially in Hypothesis I – Defined frequency provides insight or diagnosis as to the body's area of need – Discovering the segmental location was still accurate. Once Sound Script Therapy was applied, the subluxations cleared, regardless while most of the Psychological Reversals stayed. Only in one case did the reversal have to be undone for the therapy to take effect. This subject was another practicing Kinesiologist, whom we assume through her knowledge of reversal had somehow mentally become resistant to the therapy until the reversal was resolved. Once the reversal was undone the therapy was recognized clearing all lesions as measured through AK procedures elicited by TL and Challenge. This same phenomenon also occurred with a temporal tap in another subject.

In all other cases, the presence of Psychological Reversal did not affect the outcome at the segmental level – The frequency seemed to recognize subluxations individually without regard to the Psychological Reversal. Psychological Reversal could not hide from or obstruct the frequency. The Sound Script Therapist described the frequency actions like that of a wave on the ocean, that would overtake any object by surrounding it. In so doing, the direction of the adjustment became mute and the overall area changed under the frequency's influence. The final AK readings validated this theory with 80% clearing of the lesions in question.

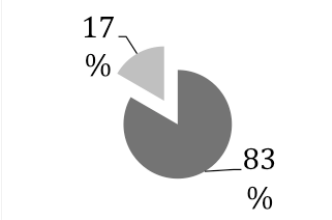


In a random Field of 50 participants only 5 presented with Psychological Reversal. Frequency was not effective to undo Psychological Reversal, however, still effective to clear any lesions isolated and verified through AK procedures TL and Challenge. It is thought that frequency surrounds the lesion and therefore reversals may become mute under those conditions.

CROSSED SUBJECTS AT THE TIME OF TONING

First we must review that Crossing differs from Psychological Reversal in that reversals function as a psychological construct versus Crossing as an anatomical need in the Meridian System. As is known and easiest to describe: persons experience crossing when the body is trying to overcome or compensate for a physical demand when it does not have the resources. That is to say, if there is an accident and you must walk but can't due to injury the body will sometimes cross brain so that the other part of the brain will take over for the injured side allowing the well side to compensate or "work around the injury." This brain crossing brings the body to demand a new cooperation. Also illustrated by the removal of brain tissue which is often accompanied by transfer of information from that removed tissue to a new location in the brain. It is felt it does that to protect itself and keep the information for the body's function.

In this study we ran into several who were crossed. The frequency uncrossed 83% but 17% did not change.



In a random Field of 50 participants only 6 presented as crossed. Of the 6, only 5 cleared in the aspect of uncrossing them through Sound Script Therapy; 1 did not uncross, however all the subluxations within the clients cleared regardless of the crossing.

There was one individual who remained crossed from the waist down after the therapeutic process. Upon interviewing him, we discovered he had experienced several injuries in his life. One that was very severe being sandwiched in between a car at the waist so that the body was severely pinched. It was thought that he would not walk after that. After much physical therapy he did relearn to walk. The supposition then is the body crossed to compensate for the injury and remains crossed to accommodate walking. Though in this subject's case the frequency was successful to point to areas of interest and also to clear them, neither frequency or AK techniques were able to uncross him. Since frequency was successful to locate and treat subluxations without manipulation and we were not measuring crossing and uncrossing in our data, this subject is part of the 90th percentile of success that "Defined Frequency" provides insight or diagnosis as to the body's area of need and Frequency itself can support and or treat the area of need without manipulation. Of the other participants that uncrossed and also cleared, we assume the body was in a short agenda, crossing them for some anatomical need that was satisfied by the frequency's support.

CONCLUSION:

The ability for frequency as used by Harmonious Life and Health in *The Sound Prescription*®, seemed to provide insight that appeared equal to medical diagnostic testing. Upon interview of the subjects afterwards, a comparison of their complaint to the frequency's answer of resolution appeared to be a viable course of action with no history taken. This action may prove usable by practitioners of manipulation, or allopathic medicine for insight to the body's direction that can be partnered with the proper choice of medication or supplemental support.

The use of frequency is becoming more significant. Just as Kenisiologists go through the process of protecting the quality and integrity of our craft, by creating the PAK level, colleges, seminars of study and research; so Harmonious Life and Health seeks to do with frequency. It is with great pleasure that I bring this particular study to your insightful ears. I thank you and so does Harmonious Life and Health, home of the *The Sound Prescription* and Sound Script Therapist, Melody Long Anglin of Daytona Beach, FL.

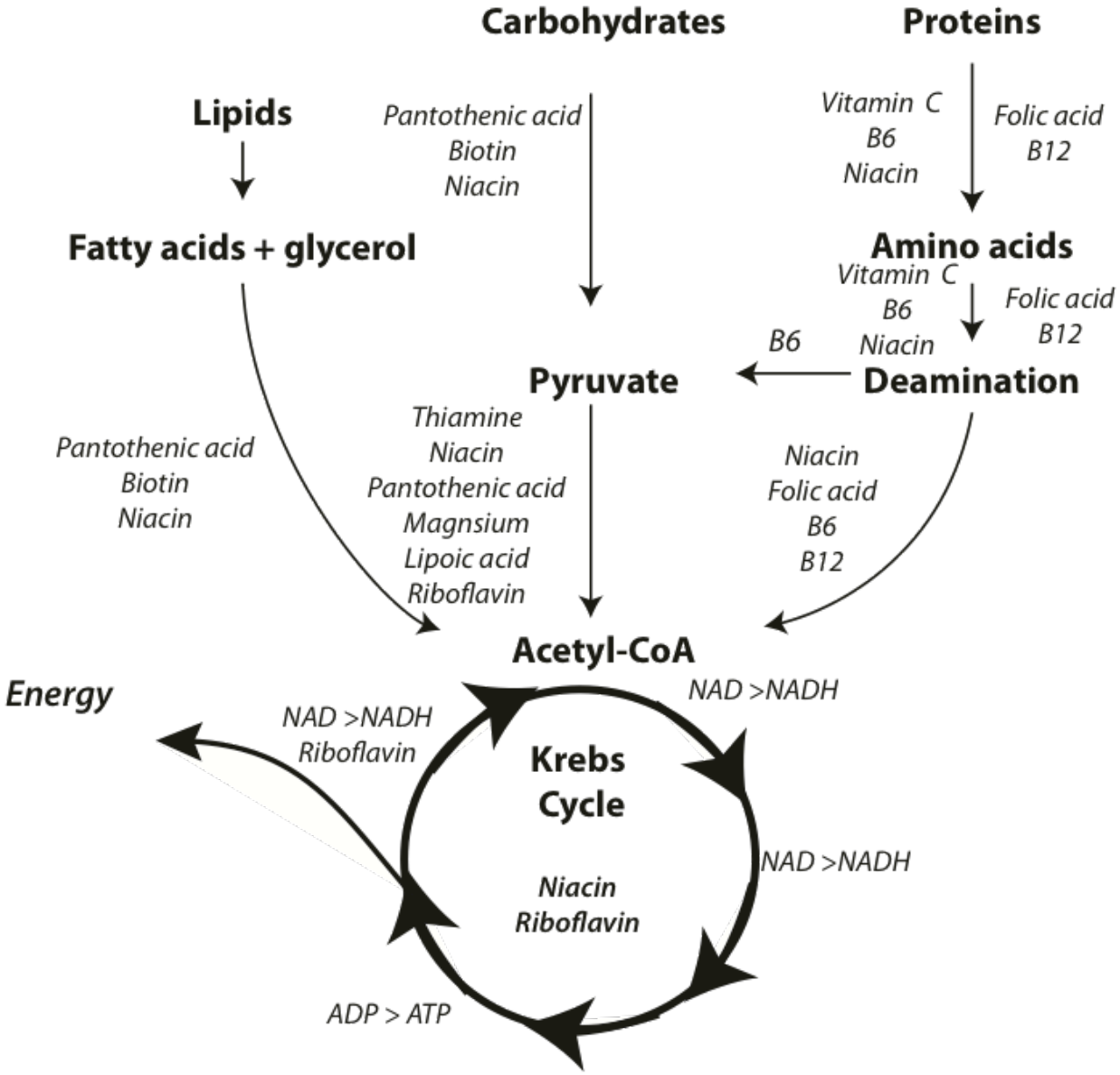
The Carbon Dioxide Challenge

David Leaf, D.C., DIBAK

ABSTRACT:
This paper will describe two major uses for the carbon dioxide challenge. Schmidt has advocated this to find imbalances in the citric acid cycle. Goodheart used this to determine poor respiration. Patients tested using this procedure may need either one or both of these treatment options.

At the 2011 meeting in Bordeaux France, Kerry McCord demonstrated the procedure of rebreathing air to increase carbon dioxide in the body and related this as a test to help determine if there was a problem with the citric cycle. The procedure started with finding a weak inhibited muscle and/or an area of palpable tenderness on the body. The person being tested was asked to breath in and out of a sac to determine if this would cause the before tested muscle to gain strength or reduce the tenderness of the area palpated.

This was followed by a description of the cofactors and other factors that could adversely impede production of energy in the citric acid cycle. A simplified review of the process follows.



As you can see from the above diagrams, NADH and riboflavin are the most common nutrients that are needed for proper functioning of this biochemical pathway. These are the most common factors in a failure of this test. For more a more in depth discussion of this, you are referred to the writings of Dr. Schmitt.

In the early 1980s, Goodheart demonstrated at seminars a procedure to determine if there was inadequate respiratory response in a patient. He would ask patient to cease respiration for 8 to 10 seconds and test for weakening of a strong indicator muscle. The treatment for this was to expand manually the areas of the torso, which moved on inspiration. For example, the anterior superior iliac spine would be pushed gently in a lateral direction bilaterally while the patient inspired. The lower margins of the ribs were pushed laterally, again while the patient inspired. The clavicles were pressed in a superior and lateral direction on inspiration. After these osseous structures were manipulated in this manner, the original test was performed again with the patient stopping breathing for a number seconds. When this was performed properly, the indicator muscle would stay strong following this carbon dioxide challenge.

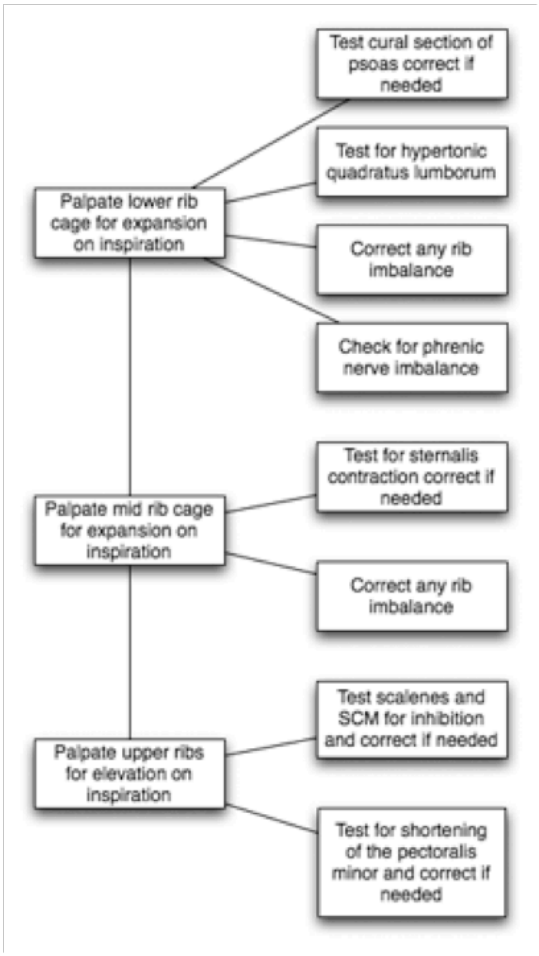
Holding of the breath for a short time allows elevation of carbon dioxide levels in the bloodstream as does rebreathing of the air.

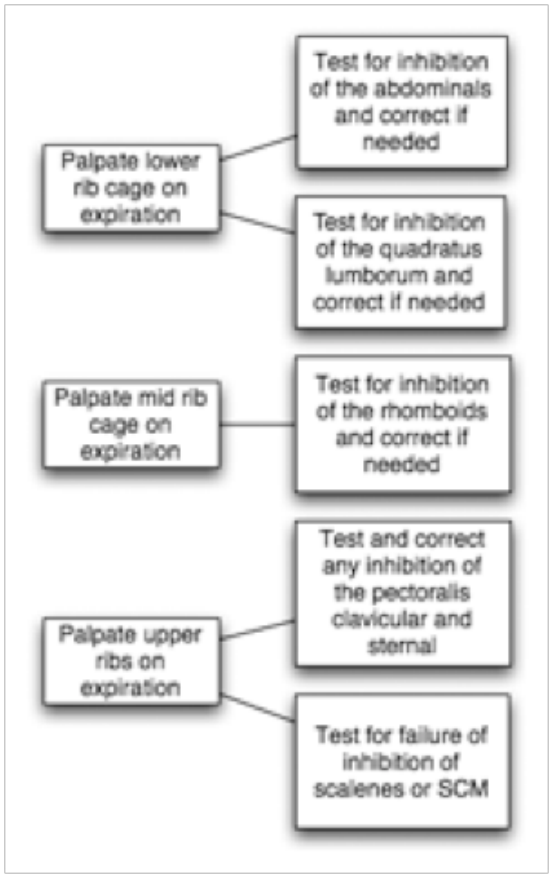
I propose that this a patient should be tested for a weak muscle, a strong muscle, their blood oxygen level and testing for oral or nasal breathing weakening a normal testing muscle. The subject should then be asked to either breathe in a suitable bag or hold their breath for 10 seconds. The weak muscle is then tested for strengthening and strong muscle is tested for weakening. In performing this test in over hundred patients, a large number of patients especially those with chronic problems will test positive for both problems. They not only have problems with the citric acid cycle but they also have problems with respiration running a low blood oxygen level in the range of 94 to 96%.

Years ago in private conversations Dr. Michelle Barras, he felt that failure of either oral or nasal respiration was one of the first findings of a patient under stress. Over the years, this has been held true in testing patients, especially athletes as they perform their workouts. Barras felt that this failure of oral or nasal breathing occurred as a part of the neurological deorganization, as the author calls it, caused by the stress. The stress could be physical emotional or chemical.

Consequently a challenge for weakening of a strong indicator muscle to oral and nasal inspiration was added to the above testing procedure.

The following is a brief outline of the procedure that is been used to increase respiration in the patients who had a strong indicator muscle weaken on the carbon dioxide challenge. Notice that testing and correction is done to correct problems on both inspiration and expiration.


Palpate lower rib cage for expansion on inspiration
Test cural section of psoas correct if needed
Test for hypertonic quadratus lumborum
Correct any rib imbalance
Check for phrenic nerve imbalance
Palpate mid rib cage for expansion on inspiration
Test for sternalis contraction correct if needed
Correct any rib imbalance
Palpate upper ribs for elevation on inspiration
Test scalenes and SCM for inhibition and correct if needed
Test for shortening of the pectoralis minor and correct if needed


Palpate lower rib cage on expiration
Test for inhibition of the abdominals and correct if needed
Test for inhibition of the quadratus lumborum and correct if needed
Palpate mid rib cage on expiration
Test for inhibition of the rhomboids and correct if needed
Palpate upper ribs on expiration
Test and correct any inhibition of the pectoralis clavicular and sternal
Test for failure of inhibition of scalenes or SCM

After doing this procedure the blood oxygen level was remeasured and found generally to increase by a minimum of 2% but also patients no longer weekend to either oral or nasal inspiration.

I would also like to note here, that in the detoxification process in phase 1 there are a number of processes that are needed that are mostly related to cofactor deficiencies. However one overlooked factor is oxidation. Consequently, increasing the patient's breathing capacity also aids in the process of detoxification at liver and should also be considered in all cases of potential toxic overload of patients.

CONCLUSION:

The carbon dioxide challenge is a good screening test for both the citric acid cycle energy deficiencies but also for determining the need to increase a patient's respiration. Correction of both of these conditions increases the patient's response to treatment and has many positive effects on the patient's health status.

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A New Potentially More Effective Way to Screen Neurolymphatics and Other Reflexes

Michael Lebowitz, D.C., Noah Lebowitz

ABSTRACT:
OBJECTIVE: To determine a faster and more effective way to scan neurolymphatic reflexes. SUBJECTS: Fifty randomly selected existing patients were used in the experiment. DESIGN: Three neurolymphatic reflexes were scanned to see if an indicator muscle was inhibited by having the patient therapy localize each reflex and stressing these reflexes with south pole magnetic energy in combination with the colors red or blue to activate the sympathetic/parasympathetic nervous system. SETTING: Private office of Michael Lebowitz, D.C..

RESULTS: Many more positive results were discovered by exposing the patient to the south pole of a magnetic wand when the south pole was colored red or blue. CONCLUSIONS: By screening neurolymphatic reflexes with a red or blue colored south pole of a magnetic wand one can discover many cases of positive results that were initially missed by scanning neurolymphatic reflexes in the clear.

Key Indexing Terms: Magnets, Sympathetic Nervous System, Parasympathetic Nervous System, Red, Blue, Neurolymphatic Reflex

INTRODUCTION/BACKGROUND:
Screening for and treating organ dysfunction is a fundamental component of Applied Kinesiology (AK). Since the 1930's neurolymphatic (NL) reflexes have been correlated with different types of dysfunction in various organs and glands. Thanks to Dr. George Goodheart these reflexes were introduced to applied kinesiology and have been utilized for this purpose with much success by applied kinesiologists for many years. One method utilized to assess organ "health" is by using an indicator muscle and having a patient therapy localize (TL) the corresponding NL points. When screening these reflexes, one wants to minimize the number of false negatives, allowing for an optimal diagnosis of the patient, and a correct treatment plan. Often times a reflex may show as functioning normally "in the clear", but this may change as soon as the patient undergoes the slightest amount of stress to the corresponding organ. By inducing a sympathetic nervous system stressor to the reflexes being screened, non-optimal functioning organs may be detected, which tested normally in the clear. Although less common, the other extreme can also happen in a patient being "too calm and relaxed", and if exposed to a stimulant of the parasympathetic nervous system an organ dysfunction can be detected.

All magnets contain a north and south pole. The North Pole of a magnet is also referred to as being "negative" and the South Pole is referred to as being "positive". According to Dr. William Philpott the "negative field" is beneficial for the body while the "positive field" causes a state of stress and disease (1). The North Pole of a magnet also has been shown to have an alkaline affect on ones body, while the South Pole has an acidic affect. Dr. Philpott also noted how the south pole of a magnet increases inflammatory reactions and the growth of noxious microorganisms inside the body (2).

While the south pole of a magnet can be used to put the body in a sense of heightened awareness (3), one can also use color to stimulate the sympathetic or parasympathetic nervous systems. According to the College of Syntonic Optometry, "short wavelength (blue) light is stimulatory to parasympathetic and long wavelength (red) light to sympathetic system" (4). S.R. Krakov initially hypothesized how long and short wavelengths affected the autonomic nervous system, and this was then later confirmed by Robert Gerard in 1958 showing how the color red increased blood pressure and arousal, while the color blue caused ones blood pressure to drop as well as feelings of tranquility (5).

By using the south pole of a magnet one can heighten the body's sense of awareness, and then stimulate the parasympathetic (using the color blue) or sympathetic (using the color red) nervous systems to scan for organ dysfunction. Using a facilitated muscle as an indicator muscle one can scan appropriate neurolymphatic points for organ dysfunction checking for inhibition of the indicator muscle when a red or blue colored south pole of a magnet is placed over the corresponding neurolymphatic point.

MATERIALS AND METHODS:

We made a magnetic wand that has a south pole facing magnet on both ends. One end has a red color added to the end, while the other has a blue color. We decided to use three different anterior NL reflexes: those for the adrenals (bilaterally), pancreas, and reproductive organs (bilaterally). First we had the patient TL each reflex and recorded whether it caused inhibition of a strong indicator muscle. We then had a patient hold the south pole of a magnet wand over the NL reflexes, scanning for inhibition of an indicatory muscle. Thirdly we placed a red piece of construction paper in front of both eyes while the patient therapy localized the reflex and tested an indicator muscle and recorded the result. Then we applied the red/south pole of the device over the NL reflexes and checked if it inhibited an indicator muscle and recorded the result. We then did the same with blue as we did with the red.

RESULTS:

Fifty patients were screened using the above mentioned methods for NL reflexes weakening a strong indicator muscle. Having the patient TL the NL reflex showed many fewer positive results compared to a patient using the south pole of a magnet or looking at the color red while therapy localizing the corresponding reflexes.

Each NL reflex scanned for showed the greatest number of positive tests when a red colored south pole of a magnet was used to screen the NL reflex. In addition, several additional positive results were found when scanning with either looking at the color blue, or using a blue south pole of the magnetic wand. (Figures 1, 2, 3)

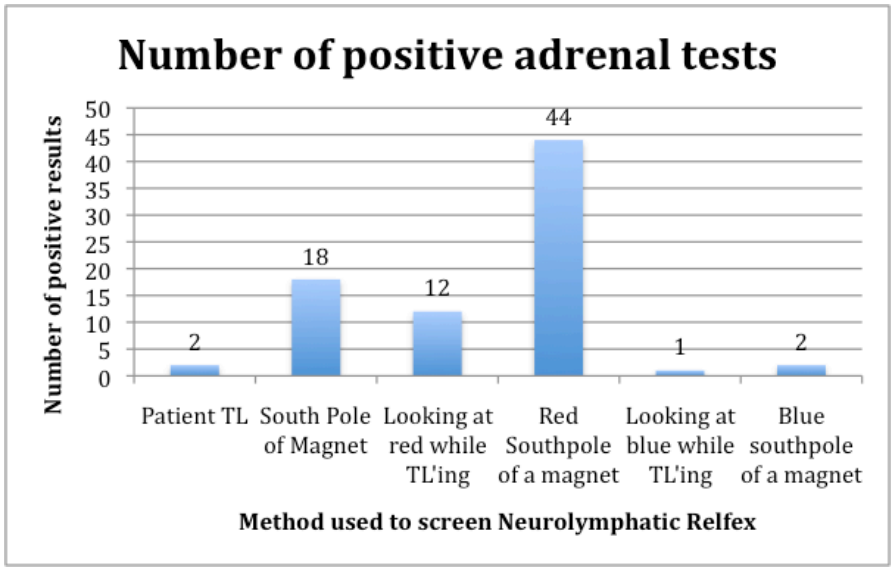

Figure 1. Adrenal NL reflex was checked and the results were recorded for six different methods of screening.

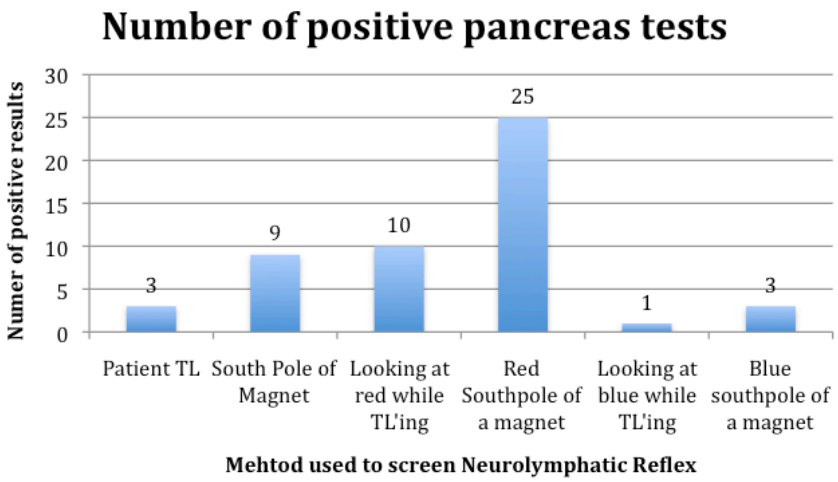

Figure 2. Pancreas NL reflex was checked and the results were recorded for six different methods of screening.

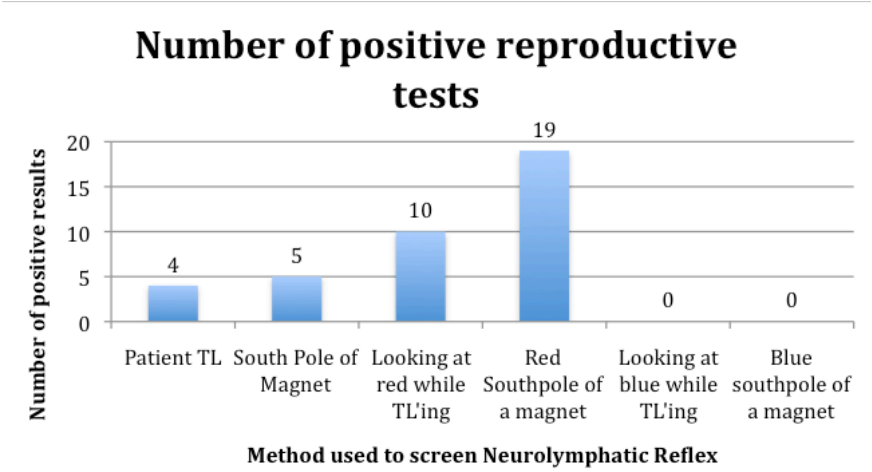

Figure 3. Reproductive NL reflex was checked and the results were recorded for six different methods of screening.

DISCUSSION:

The red/south pole combination by far showed the most positive tests with many unique findings that did not show in the other fashions. For instance, the NL reflex for the adrenals was positive 88% of the time with this method, as compared to only 4% with normal patient TL. This appears to confirm the fact, as noted by many previous AK researchers including this author- that applying the right stress can be very important to uncover relevant findings in the patient that can be helpful in enhancing his or her outcome. Of course, in these patients, we follow through with structural and nutritional support and retest these reflexes during future visits. Structural treatment involves rubbing the positive reflex while the reflex is exposed to the colored pole of the magnet that caused the inhibition response. Often times we need not treat these directly but correcting other core findings such as dysbiosis, toxic metals, food toxins, etc. as we have previously written about will bring resolution to these NL findings. In those cases we are using the tests to help monitor patient progress.

Over time we have also found the south pole/red combination has been a very useful way to find "hidden subluxations", positive acupuncture points, etc.

CONCLUSION:

Scanning NL reflexes using a magnetic wand with blue and red colored south poles is a fast and efficient way to scan for organ dysfunction. In addition to being able to easily scan the reflexes in an efficient manner, many false negatives were prevented, that were initially found with the traditional method of simply having the patient TL the various NL reflexes. Also by assessing if the organ is stressed by the parasympathetic vs sympathetic nervous system one can tailor the treatment plan in the attempt to either "increase" or "decrease" the functioning of the specific organ or gland.

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Bacterial Generated Transmutations

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ABSTRACT:
Atomic elements are considered under normal conditions to be immutable. I propose that various species of bacteria can transmutate some atomic elements into different elements, some of which may be toxic and/or radioactive.

Key Indexing Terms: Biological Transmutations, Radioactive Isotope Elements, Holopathic Imprinter, Heavy Metals

DISCUSSION:
I ran into the concept of transmutation a number of years ago in a book by Louis Kervran called, Biological Transmutations (1). In the book, Dr. Kervran elaborated on many largely unknown examples in nature where the creation of one element into another occurred. There were examples like that of grains that always have significant manganese content, yet are grown on manganese deficient soil year after year. Another was the source of calcium in the chicken egg. It has been known since the 1800's that a chicken gives off more calcium over its' lifetime in eggs than it consumes. This improbability has been forgotten and ignored to the extent that the egg industry adds copious amounts of calcium to chicken feed and yet commercial eggs are still relatively fragile compared to range free produced eggs.

The questions as to egg development are, does the shell get deposited onto the egg from the chicken, or do the contents of the egg create the shell? It appears the latter is the case. The egg initially is a membrane bound structure or bag. If one analyzes the egg contents you find almost no calcium. However there is lots of silica. As you measure the silica contents as the shell forms it disappears. The silica combines with carbon to become calcium. Chickens do consume silica by pecking and scratching looking for shiny sparkly type rocks that contain mica, a silica bearing component of granite. Birds have a second stomach called a crop that has stones in it that act as mill to grind up the smaller rocks. There evidently are enzymes in the egg membrane able to convert silica with carbon to create calcium. There are many other examples and evidences elaborated on in Kervrans' book. The thought occurred to me, what if some bug could convert some element into something harmful? I originally thought that the organism would be complex, such as a worm, but eventually it proved to be bacteria. The holopathic imprinter allowed the manufacture of samples of elements and some of their radioactive isotopes. Initially, I never dreamed what I would use the radioactive isotope elements for, but I made the samples anyway. In testing for toxic heavy metals the connection was eventually made to bacteria. Evidence of this is that the weakness induced with the toxic element most often will be negated by TLing a variety of antibiotics. The conclusion to draw are the antibiotics binding to the metals (through a property yet to be discovered) or that the indiscriminate killing of bacteria in the gut somehow has a diminishing effect on the toxic metal. If the latter is the case then some bacterial species is responsible for that elements generation. This has proven to be the case in the vast majority. I don't discount the possibility of bio accumulation, but I have not found this to be the primary cause in most cases.

A patient of mine sees a local MD that is a proponent of hair mineral analysis and the chelating out of heavy metals. Upon testing she was off the chart for arsenic. No known consumptions could be divined and her well water was tested and found to have a small amount. So, that was deemed the culprit. A multi thousand dollar whole house water filter was installed and a series of chelation treatments followed, which brought down the hair analysis arsenic levels dramatically. Unfortunately, a follow up hair analysis showed the levels to be off the chart again. I told the patient, a long time divorcee, "Your husband is not around to be putting it in the sugar bowl, so for it to build up so fast again, you are making it, not eating it". It was then easy to pattern off which bacteria was the culprit.

I have so far found about 25 bacterial species that generate an element. This is where the radioactive isotopes factored in. It would seem that in the transmutation process of addition or cleavage from a heavier element, too many neutrons were added or left behind rendering the new element a radioactive species. I find both radioactive chromium species, one to be produced by neisseria meningitis and the other by neisseria gonorrhea. One may contemplate if this segue's into diabetes or pancreatic cancer. However, the most startling and common finding is the generation of radioactive Iodine. I was always dumb founded by how one could have an "iodine allergy". I have now found this in 4 out of 4 cases I have. My record is to have found 7 patients in one day appearing to generate radioactive iodine. I don't dispute a general iodine deficiency; I think you will find this condition in the intractable cases. Also consider in females, significant iodine usage occurs in the reproductive organs. Of particular note, this condition causes weak adductor muscles and hence "bow leggedness".

PROCEDURE:
If heavy metal testing proves positive, see if the element falls onto a known bacterial generative pair. The antidotes of the bacterial/viral pair should negate the findings of the toxic element. A second proof of the creation vs. consumption condition is to have the patient TL some antibiotics. (I collect drug samples and bag them as to type i.e., pain killers, BP, chol, anti bios etc.) If the positive findings of metal toxicity are canceled, the conclusion would have to be the metals are of bacterial origin.

I would not recommend antibiotics, as that would harm good gut flora. It is just a second method or proof diagnostically. I use the holopathic imprinter generated antidotes of the corresponding bacterial/viral pair. There have been several metals like cadmium, that I have been unable to find the associated bacterial species with the limited number at hand. However, I, more than once, found the toxicity to be neutralized with antibiotics. I have also found nickel to be accumulative in the prostate which may be involved in BPH.

CONCLUSION:
I hope this proves to be another method in the elucidation of disease mechanisms.

A List of Biological Transmutating Bacterial/Viral Pairs

Aluminum	Coxiella berneti (D426) + Parainfluenza(H559)
Arsenic	Syphilis "lymphatic" (H829) + morbilinum (B863) (Morbilinum is a homeopathic nosode. Derived from a duck's thymus (bird flu) I am currently of the opinion that all syphilis is related to string # 15 of which G. Measles is a member.)
Astitine	Proven through negation with antibiotics but as of yet the responsible species are unknown.
Barium	Botulism bacillus type C (H717) + Hepatitis non A non B (D685) part of string # 6.
Beryllium	Bacillary angiomatosis (C880) + Grippe Ascant (B643) "B", if high is usually from exposure such as mining, smelting or handling in machining it, as it is used in aerospace industry. I believe it is transmutated from lithium with the addition of a hydrogen as I was able to demonstrate the addition of lithium would negate some brain challenges in a bipolar case.
Bromine	Alpha streptococcus (D 678) + Spiro virus (H504) check this in thyroid cases.
Chromium 6	This is one of the radioactive isotopes and the responsible members are string # 2 which is Herpes 1/Neisseria meningitis (Pet theory as a cause of pancreatic Ca).
Chromium 51	Found in string # 3 which is Herpes 2/ Neisseria gonorrhea (which I believe is the cause of RA and gout) (this cured my chronically weak L. dorsi muscles when rubbing the NL till bruising never would.)
Deutrium	Found in string # 11.

Eberthium	Found in string # 7 particularly Micrococcus deformans (B253) + parapertusis (A337). Due to this element's valence it would compete with most sugar handling elements.
Florine	Found in string # 5 particularly Gaffkya tetrogena (Q594) + Grippe V5 (D636) the obvious is to check in thyroid cases and fluorosis of the teeth.
Gold 198	Experimentally derived (B872) + experimentally derived (E 537) you may need to TL the Gold vial on the hip.
Iodine 131	Staphalococcus lactis (L677) + experimentally derived (E513) One of the 2 radioactive isotopes (I have never seen Iodine 129 show up for anything yet) that I find quite often. This will manifest in all manner of thyroid dysfunctions and in my experience over the last 2 years more often than deficiency (anyone with this problem will still need iodine that is non-toxic) and finally explains the etiology of one with an" iodine allergy".
Iridium	Found in string # 1.
Lead	Bacillus laterosporia (C756) + yellow fever (E520).
Mercury	Found in string # 8 Staph Epidermis group G (L958) + Tobacco Mosaic V(Q651) check in smokers as T. M. V. is a tobacco plant pathogen which they often contract.
Nickel	Bacillis megaterium (C712) + Chronic fatigue (T979) I find the prostate tends to accumulate Ni and you may need to check the vial over the perineal area or proper NL with an associated muscle, especially in cases of BPH.
Nitrogen 15	Salmonella abortis equi (M471) + Corona V (E082).
Phosphorus 32	Proven through negation with antibiotics.
Plutonium 240	Genus of Coccus sarcina (D757) + Cancer V (S934).
Polonium 210	Found in string # 4 particularly Bacillus Gaertner (B887) + Molluscum contagiosum (N137) the valence of Po will compete with selenium.
Strontium 90	Proven though negation with antibiotics.
Tellurium	Staph albus (L205) + influenzium (E126).
Uranium	Experimentally derived (B880 + experimentally derived (N117), sorry I neglected to document which isotope I found and how I derived the code numbers (I have only found this once).
Yittrium 90	Found in string # 1 (along with Ir) particularly Clostridium tetani (N688) + Grippe (C974 according to Dr. Olrey) is used in bacterial metabolism, however a radioactive isotope persistant in our tissues is probably not beneficial.

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Observations on Bacteria/Viral Infections and Their Treatment

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ABSTRACT:
This is the resurrection of an old observation by Dr. Royal Rife that a virus is actually a bacterial product and that the bacteria have pleomorphic capabilities. This paper will describe methods to diagnose and treat for that possibility. Some strains can morph into upwards of 9 forms that I have been able to identify. All the forms must be eliminated or recidivism eventually results.

Key Indexing Terms: Bacterial Pleomorphic Capabilities, Dr. Royal Rife

DISCUSSION:
We all try to find the source of various signs and symptoms with bacterial and viral infections as well known factors. One concept not having met mainstream approval was an observation by Dr. Royal Rife in the 1920's that viruses are products of bacteria (1). When reading the book, The Cancer Cure That Worked by Barry Lynes, my initial intent was to see what type of alternative cancer treatment perhaps existed. The book was much more than that. The book chronicled the life work of Dr. Rife, a scientist who should be a household name like Thomas Edison. Dr. Rife managed to invent a light microscope with much higher magnification than has yet to be reproduced (2). With this microscope he was able to watch live specimens over time and observed bacteria generating virus. Then, if grown on the proper media, the virus would return to their parent bacterial form thus satisfying a Kock's postulate. There are many more fantastic discoveries from Dr. Rife but only this finding is relevant to this paper.

I would check for infections with samples from various kits. They would contain numerous common pathogen samples of both bacteria and virus. There were times a patient would test for an entity and all our therapeutic methods we all know and use would be applied. However this concept of bacteria generating virus stuck in my mind for some odd 15 years until a bug bite on my arm proved the concept to my satisfaction.

To make a long story short, I was bitten by what I suspect was one of those Asian beetle "Lady Bug" look-alikes in February. Within 4 days I contracted, based on our AK diagnostics, Kliebsella pneumonia which was successfully treated. Oddly, I had two more cases, but in one, I was able to identify a virus following the Kleibsella. I have always maintained a certain vigilance trying to prove or disprove this bacterial/viral concept. I thought that if this patient has Kliebsella and a particular virus, I should demonstrate the same findings. As it played out, I did have the virus as well as evidence that the bacteria was returning. Since that time I have tried to track which bacteria are consistently found with which virus. As experience was gained, there did appear to be correlation and consistency. With more time however, glitches seemed to develop as there were more than one virus per bacteria or vice versa. These findings seemed to persist accurately to my dismay. At this time I acquired the holopathic imprinter and in most cases was able to double the number of pathogen samples. This allowed the completion of many of the anomalous findings I had been getting. The data I was starting to generate implied that certain bacteria have the capacity to morphologically change into several different forms of bacteria and/or viral entities (3). I call these "STRINGS". I currently have elaborated over 20 such strings. My current fear is that my sample base is too small to be confident that all members of a particular string have been cataloged. There are other researchers who have also been advocates of pleomorphism.

The concept of the pleomorphic strings has brought on the realization that many of our childhood illnesses have never really left us. They appear to linger on like shingles from earlier chicken pox. Of these the most notable finding is that rheumatoid arthritis and gout are caused by neisseria gonorrhea and its attendant morphs (4). In a similar fashion neisseria meningitis causes spinal arthritis. While I was initially shocked by this conclusion, upon investigation of homeopathic literature, it was common knowledge that gout seemed to follow gonorrhea infections.

As you can see from the string chart, gonorrhea gives off the herpes II virus, which is not such a stretch to imagine why herpes would manifest in the genitalia and with N. meningitis sprouting herpes I would manifest on the lips. One may speculate as to the pathology chronic infections across the blood brain barrier may generate. I have been able to demonstrate spinal stenosis and ankylosing spondylitis from N. meningitis. Consider how 70% of the U.S. population tests for herpes antibodies.

Personal Story

These concepts really had their early developments arising out of my own suffering with gout. This is a rather long story but it started when I had purchased homeopathic remedies of the nosodes. Upon random testing, I would obtain some positive muscle testing outcomes occasionally implying that some patients harbored some of these infections. These produced several positive clinical outcomes over time. I was treating a friend at my home for several symptoms including a hacky cough and multiple joint pain of several months duration. He asked at the end of the treatment to check him with" those" remedies as I had mentioned them before. To our surprise he tested for gonorrhea. So after the required teasing about what he was going to tell his new wife, I treated him with a few doses of the remedy. He happened to set a glass of water he had been drinking on the counter where my wife usually placed her glass. She mistakenly used his glass 2 hours later, about 8pm, for a drink. The following morning she woke me to tell me she thought she was getting a bladder infection. She asked me if it were possible to get an infection from his glass as she realized her mistake and had heard us talking of gonorrhea. I stated that is not the way to catch gonorrhea and it had to be coincidence. By evening it had spread to the kidneys with frequent urination and burning. So the choice was the ER or to fix it and I'm happy to report we knocked it out in a day and a half. However, an observation made by homeopaths was that if one tried to kill an infection with antibiotics or herbs (they would not see a distinction) the result would not really be a lasting cure. Their explanation is that the infection is driven in deeper only to recur with the possibility the symptoms that arise may even be different the next time. Now we can either dismiss their collective observation or ponder the correctness of the statement and try to elucidate a mechanism.

There appears to have been discovered a plausible mechanism whereby a bacteria, when able to sense it is dying, coils up its DNA and a protein coat is assembled covering it. Then, as the bacterium degenerates, the DNA capsid (virus) is freed into the environment (5). Bacteria may be able to generate virus in times of health which could be Dr. Rife's observation. Many antibiotics work by plugging up the pores in the cell wall of a bacterium effectively suffocating it.

Several weeks passed post kidney infection and my wife starts to get a hacky cough. So I interject some ill received advice on her diet to ameliorate the problem when she says "well it all started when I drank from that glass". You may recall how Dr. Goodheart said to listen to your patients and they will tell you what is wrong. I then checked her for the presence of the gonorrhea and got a positive result. This evidence hit me very profoundly; I had what I would describe as an intellectual nervous breakdown. I was literally trembling like a leaf, I could not sleep over the portent of doubt that this event cast on what "other scientific dogma" we entertain as truths. I had to reconstruct scientific concepts, like Descartes', "I think therefore I am" before I could sleep. Ideas, such as Newton's laws, basic AK, etc., I decided were sound, but there were big grey areas especially in the germ theory, considering the many homeopathic observations.

Several more weeks pass and I was plagued by why if this gonorrhea is so virulent I didn't contract it. As it turned out, I did, and the old fashioned way! My symptoms were different, however. I had a recurring T4 subluxation and the almost imperceptible twinge in my urethra. As you may have guessed the correction took gonorrhea remedy. I treated us both with a few pellets in a rather low potency and called it good. At least 10 years go by and I suffer my first gout attack. It lasted about a week only to return a year later. Then the next outbreak was 6 months later, followed by another at 3 months, still more occurrences 1 month later, then at 3 weeks from the last one, each of 1 week's duration. I did not sit idly by and wait for it to subside, but something peculiar with gout

that I have found is that it does not TL. Your ankle is beet red; you can fry an egg on it if you could stand to touch it. You cannot even hold your leg in the air and rotate it as gravity will pull on your foot in the most excruciating manner. I have said of gout that if the house were on fire, I don't feel I could run on it, and I could not imagine it hurting any worse than if you had cut my foot off at the ankle and were made to walk on the bloody stump.

I finally found a multiple cross TL pattern that would at least muscle test the gouty joint. TL pec minor NL, Sm and Lg intestine NL on the thigh and GENTLY scratch the gouty area. I decided that if this condition was due to all the "things" you read about gout, I was going to eat my last dish of ice cream, my last shrimp, my last pizza with ham. However on my list of possible events in my history was the gonorrhea episode. Granted diet was in the front running of possible causes in my case, but I tested for the homeopathic gonorrhea remedy. When I first took a dose, within 5 minutes my ankle flared up and pain traveled into my knee. I rolled around in agony for 45 minutes until it subsided. In the rules of homeopathy, "like cures like", I had made a minor connection. I was off in some way which proved to be the potency. It was too low, but the connection as to the causative agent in gout was found. Before I got too excited about my great discovery, I knew that the homeopaths have many insights into gonorrhea, so how could they not be aware of this connection? It turns out that they did know. I really didn't discover anything.

Better Results

Since the discovery of the TL pattern for gout, every case of gout has responded the same and to the homeopathic gonorrhea. In terms of treatment I was getting mixed results. Often the spouse is a carrier asymptomatically and sometimes the children. I would rule out pets as well.

One medical statistic is that men get gout 3 to 1 over women and women get RA 3 to 1 over men. I had often wondered if RA was something similar to gout (an infection of some sort) but while attending a seminar by Dr. Olrey the premise was put forth that RA was female gout. I had never thought to check for RA as gout. Now with great regularity, even one Heberdon node on a finger responds to the TL pattern and to gonorrhea remedy.

Success in diagnostic cause and effect and eliminating RA are two different things. I was having better results on men's gout than RA, but the female RA was more defiant. This was in the middle of when I was verifying bacterial and viral combinations. One of the pairings was shigella dysentery and herpes I. Eventually another shigella, "boydi" was found to pair with herpes II. I also had pairings for N. gonorrhea and N meningitis. As testing continued the aforementioned glitches where found to be consistent as the shigella's and herpes tested with the gonorrhea and meningitis respectively. I continued to connect what were thought to be errors or glitches and hence the name "strings" of bacteria and virus. The concept is elegantly simple as herpes I pairs with meningitis and herpes II pairs with gonorrhea. The meningitis gets across the blood brain barrier and it's herpes I virus sits in the cranial nerves just like it's other illustrious family member" shingles" only in different geography, the lips. The same can be said of where herpes II manifests and its relation to gonorrhea. Now that all the members of this string have hopefully been uncovered, my attempts at treatment of RA and of course gout have been much better. The accumulated damage stays but you stop the inflammatory component and have better energy etc.

PROCEDURE:

I have found that with the TLing of bags of homeopathic nosode samples, there are times that a patient is unable to elucidate the offending entity with such a multitude of others present (can be 370 samples). So I thought to put all the strings known into their own small bags. This brought together the "essence" of all the offending parties and removed the influence of the nonessential members from the test. Several of the small string bags can be put together for what I would call increased clarity and the testing proceeds quickly.

What one finds is that when a bag with a string is found, the patient may actually be testing to only one or several members in the bag but not necessarily all of them. So how is it that the string is determined? One feature of the

holopathic imprinter is a wired hand hold that broadcasts the signal of the remedy you are going to generate. If a patient responds to only one or two of the samples in the string, proceed to make those in an anti setting at the sample's respective code number as per Dr. Baroody's Vol III (see my compiled lists). Then have the patient TL the remedy you just made and proceed to check with the hand hold typing in other code numbers of the remaining members of the string until all the members have been proven to exist in the patient. In the anti setting the frequency is inverted. All my nosode samples are made in the pro position. The concept is that in the normal process of homeopathic dilution and seccussion, that a copy is rendered. This would be analogous to the "pro setting" on the imprinter. Remedies generated in this fashion will work but my experience has been for treatment to use the inverted "anti" derived forms seem to work faster in symptom elimination by about 1/3. The fact of how two waves, one inverted, will completely cancel each other.

The next step is to determine the potency setting. I muscle test using the hand hold in the anti setting with ever higher increments, until the patient weakens. Then I make the remedy at one setting lower than that which weakened. If the patient maintains strength to maximum, then make it at maximum. I also have learned that all the lower settings have to be generated in the remedy also, as I found the infectious agents can duck under that highest setting and continue to flourish. Usually once a maximum strength setting has been found on a patient, the rest of the strings members will usually all be the same setting. Another disturbing development is that imagine that any code number may represent an average for that particular germ. Once you start to treat with the remedy, you push them to evolve at a different frequency, usually next to the one you are using. The solution is to, at the start, also generate bookends or blocking frequencies in anticipation of their attempt at dodging your main frequency. For example if a code number is E550 generate all the potencies of E550, but also add a couple of potencies at E551 and E549. Also be aware that on any given patient the listed code number could be off by one digit or that their germs are growing under more than just the single listed code number. An example would be, when testing with the handhold, you may get the anticipated response at E550. However also check E551 and E549. If E551 was positive then the remedies would be generated as all potencies for E550 and E551 with blockers at E552 and E549. Repeat these steps until all members of the string have been found. This just reinforces my contention in the AK concept of layers.

Procedure Summary

A. Establish presents of a bacterial/viral string by TLing pre-made known samples.
B. Using the hand hold, type in each code # and muscle test (set at 99 potency and in pro configuration), (a strong indicator will weaken).
C. For each code # found, find the range above and below the main # the patient responds to. (I use a post-it note to document these ranges so as to not go back and forth between the testing and remedy generation stage as it gets confusing and difficult to keep track of the settings).
D. Next establish the maximum strength/potency the patient will tolerate in the anti setting of the main code # (this strength will usually be consistent for the rest of the string).
E. Generate a remedy of all the positive codes in the anti setting containing every potency up to the maximum the patient tolerated. Also remember to generate blocking code #'s above and below any positive code found.
F. For any code #'s of the string that were not found, have the patient hold the newly generated but incomplete remedy (this should uncover at least one more code # if they all did not test positive the first time through) and repeat step B then E then F until all members of the string have been validated within the patient.
G. Treat with 1 drop an hour for a maximum of 10 drops a day (there can be some variability to this rule as my dosage is probably pushing the aggressive side) (doses are cumulative).
H. I feel that the remedy should be taken until the patient exhibits weakness on muscle testing to additional doses, not presence or absence of symptoms. I understand this is not always convenient. If new symptoms arise it is easy to ascertain if they are what are known as homeopathic aggravation or something unrelated to any effects of the remedy. Find a way to bring the new symptoms into the realm of muscle testing and see if more of the remedy negates them. If so, continue with more remedy. Conversely if an extra dose or TL of

the remedy produces weakness it is completed.

CONCLUSION:

This endeavor, while initially confusing, has led to my belief that we are usually never over our childhood diseases. They are not eliminated from our bodies but linger on (6, 7, 8). Our immune systems expend energy corralling them all until some weakening stressor allows one of these entities to bloom with what may not be recognizable symptoms to the original infection. Only through muscle testing are we afforded the ability to glean data of this type. I have heard before that nearly 100% of the U.S. population contains Epstein barr antibodies. Another statistic is that approximately 70% of us have herpes antibodies. If I am right there is a whole lot more gonorrhea and bacterial meningitis present than generally believed.

I have found numerous cases of malaria. It will produce a large drain on ones vit C and will produce a global ligament stretch reaction. If a patient takes extra vit C they can sometimes hide or prevent the stretch finding however. One "tell tale" sign of the presence of malaria is cherry hemangiomas. They are those little "braille like" red dots one gets on our skin. Another interesting finding , but not always present, is the code # for L-form bacteria (which are implicated in atherosclerotic plaguing)will test over an area of possible blockage and only to date exist with the neisseria's.

I had a dramatic resolution in a severe case of hepatitis B that initially did not respond to therapy directed at the virus alone, until the "parent bacteria", syphilis, was isolated and treated also. This progressed to the point of learning that syphilis and hepatitis B are also related to the German measles string, (yes, I have reproduced this multiple times).

With these pathogens potentially being related to one another, I have no idea why the symptoms of some of them would be sublimated. Clinically I find that once obvious conditions are erased, the stubborn chronic conditions are often these strings. While initially it is a great volume of work to generate the testing vials, I have been very excited and am continually amazed almost daily at what manifests. I'm sure there are potentials here I have not thought of and some of you in the general membership should be able to add some incredible advancement's.

A List of Bacterial / Viral Polymorphic Strings

#1 EBV (D428), (D586) + HPV (K021) + Hep A (D647) + Strep mutans (E635) + tetanus (D741) + Arbo v (A825), (D637) + Micrococcus acidilactici (E136) + Yttrium (C732) + Iridium (C411).

#2 Neisseria meningitis (F016) + Herpes 1 (E614) + Shigella sonnei (E393), (I959) + Grippe VA2L (C686) + Meningitis toxins should be present (D589) + Chromium 6 (C882) + Nanobacteria (O922).

3 Neisseria gonorrhea (F016) + Herpes 2 (D409) + shigella dysenteriae (I819), (D750) + Echo v (E509-12) + Chromium 51 (C416) + Nanobacterium (O917) – optional/ Gout (V645), Gouty inf (H135), Urea (F580), Uric acid crystals (N447), (B837), Gonorrhea (V246), Medorrhinum (B405).

#4 Herpes zoster " chicken pox" (D519) + Coxsackie v B5 (I374) + heliobacter pylori (B257) + Bacillus gaertner (B887) + Molluscum contagiosum (N137) + experimentally derived possibly A shigella sp. (I588) + Polonium 210 (C512).

#5 Rabies v (D866-8) + Gaffka tetragena (Q 594) +Grippe V5 (D636) +West Nile v (J571) + Staph Albus (L205) + Influenza (E126) + Feline Leukemia v (K887) + Hepatitis C (D171) + Lacto- Bacillus pento aceticus (M882) + Floride (C816).

#6 Diphtheria (E086) + Bang (C179) + Brucellosis (A293), (D977), (M456) + Hepatitis non A Non B (D683-5) + Asia Flu C (C280) + Strep pyogens (E273) + Botulism type D (H728) + Viral Pneumonia (L598) + Barium (C646).

#7 Hemophilos influ (E096), (F009) + Varicella zoster " small pox" (E332) (M389) + Micro-Coccus ET

Staphalococcus (E184) + Micrococcus deformans (B253) + Parapertusis (A337) + Experimentally de rived v (E509) + Erbium (C880).

#8 Tobacco Mosaic v (Q 651) + Staph Group G (L958) + Strep hemolyticus (F045) Grippe VA2 (977) + Mercury (C931).

#9 Resp Synctal v " RSV" (F037) + Dystemperium (B241) + Coliform (R437) + Arsenic (A534).

#10 Neisseria Veillonella dispar (I696) + Grippe Ascant (B643) + Shigella boydii (I652) + para-Tuberculosis (V665) + Bacillary angiomatosis (C880) + nanobacterium (O934) + Beryllium (U578).

#11 Antrax (D335) + Warts verucca (E534) + Staph mitis (L738) + Human Papilloma V (K021) + Warts papilla (E433) + salmonella enteritis (D660) + Deutrium (C766).

#12 Molluscum fibrosum (A328) + Caulobacter vibroides (M836) + Influenza Asian B (C206) + Vibro comma (M443).

#13 Mumps (E691) + Grippe V 4 (C974) + Pneumococcinum (D547) + Common cold (D401), L921) + Pseudomomas # 2 (Q 842) + Coxsackie B3 (D533) + Gasodema (F007).

#14 German Measles (E869) + Hammophillus ducrcyi (L697) + Reo v (E171) + salmonella Typhimurium (F093) + Serratia marcescens (F682) + experimentally derived bact and virus (B885) + (E789) + Hepatitis B (F010) + all Syphillus code #s (except congenital) (O952) + (H830) + (H626) + (548) + (H616) + (H829 This form implicated in arsenic transmutation) + (H662) + (H594) + (H256) + (V774) + (G616) + Syphilitic toxins (D765) This remedy takes Approx.. 1 ½ hrs to generate.

#15 Paratyphus (C289) + Encephilitis (A853) + Salmonella typhimurium (F093), (E527) (I have some doubts this string is correct).

#16 Malaria ertain (D364) + malaria toxins (E514) + Campylobacter jujuni (M735) + Electro-Magnetic Frequency V (D072) The herbs alfalfa, burdock, and feverfew will also treat this group. Anyone with a " cherry hemangioma" has this infection. If you check post treatment or if TLing the remedies, the patient will now check for " ligament stretch reaction ", and need Vit C in fairly high doses. The patient may also test weak to the mosquito energy signature. (E261 pro setting) and often describe themselves as the one that mosquito's "love".

#17 Plasmodium cynomolgi (D367) + malaria toxins (E513) + experimentally derived bact and Virus (M732) + (D 073) The herbs alfalfa, feverfew, and fenugreek will antidote this group.

#18 Neisseria sicca (N528) + Canine distemper (V009) + Monkey polio (S517) + Mosaic V (M419) (F147) + Strep veridans (E185) Parvo "Likely B19" (I have to use a veterinary homeopathic from South Africa "sorry") + Hanna Kroeger brand homeopathic salmonella (parvo is 5ths disease and is a herpes V.

#19 Coxackie B1 (C974) + Hemophillis vaginalis (O010) + Inflenza C (C280) + Strep pyrogens (E273) + experimentally derived bact (2) and virus (Q 843) + (F007) + (E320).

A List of Suspect Bacterial/ Viral Pairings Currently Not Known to Belong to a String

Alpha streptococcus (D678) – Spiro v (H504)
Bacillus fragelis (L520) – HIV (B338)
Bacillus laterosporus (C756) – Yellow fever (E520)
Bacillus morgan (C307) – Lymphogran inguinale (D734)
Bacterial endocarditis (C903) – Rhino v (E316)
Bacterial rheumatism (C789) – Simi 40 (D456), (S665)
Beta strep (P547) – Dengue fever (494), (E921)
Clostridium tetani (D741) – Arbo v (A825), (D637)
Elkanella corroden (N681) – Grippe V2 (D321)
Enterobacter aerogens (J888) – Paricarditis (L565)
Flexners shigella (R685) – Coxsackie B4 (R595)
Gardinella vaginalis (H842) – Adenovirus (D497)

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Observations on Molds and Their Treatment

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ABSTRACT:
A clinical entity which does not garner much inspection is mold infection. In this paper I will outline some protocols for the diagnosis and treatment of mold infections and discuss their capacity to manufacture human hormone This phenomenon is what is behind so many of the "female" hormone disorders, but males are not exempt either.

Key Indexing Terms: Hormone Disorders, Dr. Royal Rife, Molds, Fungus, Holopathic Imprinter, Pleomorphic Organism

DISCUSSION:
I find in my general practice that the prevalence of mold infections to be rather high. Molds induce signs and symptoms ranging from cold and flu to neurodegenerative disorders. A patient may have several different species infecting them simultaneously. I also believe to have discovered that molds have the capacity to manufacture human hormones.

Molds are very pervasive in the environment. You may try to inoculate your premises on one of those nice sunny days by letting in fresh air but what do you think the mold count is!? Mold can grow with as little as 60% humidity. I can't speak for all climates, but in Michigan a typical home can become contaminated by stachybotrys in as little as 5 years. Stachybotrys is able to eat the paper/cellulose backing on drywall. It receives additional moisture from sweating pipes. Once a structure has had a leaky roof or basement flood, mold infestation is almost inevitable. I strongly recommend air purifying machines that generate ozone or hydroxyls, not filters.

When I was a child, the typical house had hardwood floors. During the 1960's, advertising pushed carpeting to the extent that you were some kind of caveman if your home didn't have wall to wall carpeting. With hardwood floors one was able to dust accumulating debris. Carpet however becomes a giant petri dish. Those of us doctors 50 years and older might think back to grade school and remember if any classmates had "allergies" or "asthma". I remember one of each. Now, the fact is that 50% of students have asthma is simply a national statistic.

Some foods are notoriously moldy like strawberries or raspberries, but one food most people are not aware of is corn. There is a very interesting book I feel we all should read by Doug Kaufmann called, The Germ That Causes Cancer (1). The book mentions a project where corn was washed and placed on a Petri dish and the researchers were able to culture 23 different mold species from it. So the presence and exposure to mold is constant. The best we can do is to use our immune system and operate with a little diligence in exposing ourselves to them. Generally, the diagnosis of a mold requires the use of a kit with either real or homeopathic representative samples. In my other paper on parasites I mention those from Dr. Smith, Dr. Lebowitz, and those that can be manufactured from the "holopathic imprinter" by Dr. Baroody.

In the book by Dr. Livingston, Cancer a New Breakthrough, evidence is produced rather convincingly that cancer is the result of an infection by a pleomorphic organism (2). This means an organism that changes shape like from a caterpillar to a butterfly. Dr. Livingston goes on to espouse that one of the forms generates a human hormone; human chorionic gonadotropin, which ultimately is immune suppressive. Through a serendipitous reading comprehension error on my part, I thought she implied that the hormone producing intermediate form was fungal or fungal like. I came up with the idea to see if other molds had the capacity to make hormones. Of course this requires a hormone kit! It was not long until I was able to find numerous correlations of this kind. These relationships appear to be static, as it seems for a given species the same hormone is always produced. There were occasions when I found more than one hormone for a particular species and I wondered what kind of error I was generating, but I now believe a few species are capable of generating several hormones at once.

The correlations present themselves in the process of the mold diagnosis. When TLing the mold samples, there are times where the indicator muscle will not be inhibited until the proper hormone is added also. Since weakness is induced, the interpretation is the hormone is in excess and has some relationship to the specific mold. The concept of a mold manufacturing a hormone should not be viewed with huge surprise as there are textbooks written on this topic of which pathogenic molds make hormones, but in PLANTS. Why not the same conclusion for animal pathogenic forms?

Clinical Success

One of my favorite stories of clinical success was of a woman while breastfeeding her second child. She was producing inordinate amounts of milk, even while small breasted. With her first child, the breastfeeding was unremarkable. This time she was drowning the child. He could not take any more, the freezer was full. She had thought of selling the extra, but knew of the tremendous nutritional drain the milk production created. I, before this time, had identified a mold that generated prolactin. If one had this mold as an infection there would be an apparent over production of prolactin. So what would you suspect the result would be on a lactating mother? She presented to the office, and was indeed harboring that particular species, whereupon in two days on the correct herbal remedy, flow returned to normal. Consider endometriosis, uterine fibroids, and some breast cancers, how these are known to be estrogen driven. Ask the questions. Are these hormones the product of our own glands? Are we designed to have errant metabolic controls? Where does the excess estrogen come from in a post-menopausal woman to drive the breast cancer? It must come from those adrenal glands we have been diagnosing as hypo functioning since the 70's. I am of the opinion that our glandular function (with a few exceptions) will generally run correctly and when it does not, look for an outside influence by a hormone producing mold. Yes, I am aware of the issues with soy and milk , and the "sea of estrogen" we swim in, but my experience since elaborating the fungal/ hormone relationships has been that the mold induced hormone problems by far dominate.

Mycoplasmas

The second issue I believe to have discovered is that mycoplasmas are the products of molds. In the book by Barry Lynnes, The Cancer Cure That Worked, the research works of a Dr. Royal Rife are discussed (3). One of the many areas of Dr. Rife's genius was the development of a light microscope that had better resolution and power than is thought to be theoretically possible even today. With this microscope Dr. Rife was able to prove that virus were the product of bacteria. He was able to watch bacteria have virus form within them and for lack of a better word, birth this virus and have them grow back into the same parent species of bacteria they originally came from fundamentally proving a Kock's postulate. I read this particular bit of information over 15 years ago and only in the last couple of years proved it to my satisfaction. These findings will be in the next paper on bacteria and virus. However, there exists a small group of virus like organisms called mycoplasmas. In the data that I can gleaned, there seems to be a lot of controversy over what a mycoplasma is. The consensus I went with is the one put forth in the article "Avian Flu or Mycoplasma Pandemic" (4). The authors describe mycoplasmas as virus- like only with less DNA and a soft as opposed to a hard shell. Based on that trivia, I ran an experiment to see if mycoplasmas could be the product of fungus in a similar arrangement like the bacteria and virus have. Prior to this time, I would check for the fungus and mycoplasmas separately. It was by this time that I had started to find many of the bacterial/viral pairings. If one tests for these infections with the idea that these entities are related to one another, the times you will find positive muscle testing outcomes will be several fold. So when I started to check the fungus and mycoplasmas together, the pairings came so smoothly with the 30 plus mycoplasma samples that it helped to convince me of the validity of the idea.

What should become apparent is that with molds or bacteria you really have a dual infection. The molds leave behind mycoplasmas to infect cells in much the same way a virus does. However, the infections are very slow and don't necessarily generate a huge immune response, so you may not have pain and swelling, just a gradual loss of function. The only therapy I have found to be effective against the mycoplasmas has been the homeopathic nosodes. The parent mold must be killed as well and for these I have elucidated many herbs.

PROCEDURE:
Screen for parasites first as they seem to block finding any molds if both are present. If negative: Screen for molds/ mycoplasmas by TLing your two sample bags. If still negative and adequate suspicion exists for the presents of infection, continue to add stresses like the hormones and/or the mycotoxins, or perhaps sugar, etc. If the nature of the symptom is neurological, then add the physical type of task challenge also. When positive, isolate the offending entities and then cross reference them to the provided charts as to what herb is required to treat them. However, unless you have the homeopathic nosode samples of the mycoplasmas, I feel that while you may do some good eradicating the parent mold, the left behind mycoplasma is still creating damage and will likely repopulate the infection. The same holds true for the bacteria/virus.

As you continue in these endeavors, you may find that a patient is often inflicted with more than one fungal infection. Sometimes multiple infections can be found in the same visit or they may seem to have yet another at the following session. I feel you can treat more than one fungal entity at a time but as always, consider the status of a patients detoxing capacity. The dosage I use is 4 droppers full per day if in tincture form, and 2 tbls., 4 times a day if in dry form. If you choose a different brand than those I have listed you should make sure that the weaknesses are negated as I have found not all brands of the same herb or from tincture vs. tablet/capsule to be interchangeable. I dose the nosode at 10 drops a day, made in the "anti" setting on the holopathic imprinter at one strength/potency setting below that which generates a weakness. If the patient stays strong until maximum potency is reached (MM) then I make it at MM. The duration to take the nosode usually doesn't exceed 1 week. However, the final criteria I use is that the homeopathic is terminated when you have a reversal in the muscle testing outcomes. In other words the remedy will now weaken in the clear. I have never seen the continuation of the parent fungus infection if the mycoplasma nosode tests clear.

CONCLUSION:
There is a Dr. Rosen in Florida who has made mold treatment a specialty and has written a downloadable book. One of his key diagnostic indicators of mold infection is a cognitive change. The reason is all the mycotoxins found to date are fat soluble. Even though some of the toxins may be more specific to renal, neuro, or hepato toxicity, that fat solubility remains. There is a theory that the body's response to the mycotoxin is to put on weight to dissolve the toxin in instead of allowing those toxins to concentrate in our nervous or glandular tissue with their high fat content. Dr. Rosen also states that 25% of the population is genetically deficient in regards to being able to breakdown mycotoxins. One of his fundamental treatments is to use an anti-cholesterol drug of the variety that absorbs cholesterol from the gut. It appears that the chemistry of the toxins lends itself to being bound by that type of pharmacological agent. Another bit of trivia is behind the use of antibiotics in the meat industry. The application of anti-biotic, being fundamentally a fungal toxin, causes the animal to respond as if there is a fungal infection and it puts on weight rather quickly. Since we buy meat on the hoof, anything that creates extra weight has become standard practice.

There is more to the story as to how the proofs unfolded for me as to how the neurodegenerative capacities of the mycoplasmas arose. While I was taking the Neurology Dip. Program , during the cranial nerve segment, I was diagnosed by the instructor as having the most profound right Vagus paralysis he had ever seen along with the inability to smell from the right nostril. We were not able to find any causative reasons and I blamed high school football neck trauma. I did not make the connections symptomatically prior to this, but I often drink fluids when eating and usually once a meal I aspirate on something when my epiglottis doesn't appear to function properly. Also my vocal cords do not vibrate on the right. As part of the tool kit with the neuro program, I acquired a pulse oximeter. So for the next several years I would always check myself when I checked a patient. My heart rate was always unremarkable until one Monday morning it was 110 bts/min . From that day forward my rate was always 110 or slightly higher. This continued for several years, never below 110, until I learned the mycoplasmas can infect nerves. It took about a month to really figure out how to successfully treat mycoplasmas when after about

6 months I started to get sporadic vagal functioning as was witnessed on the pulse oximeter. I rarely register in the 70's, but at least my rate is not pegged at 110. Better to have some function than none. I also ran into the fact that if one has had a heart transplant their rate is 110 beats/min due to the severing of the vagus N. as consequence of the surgery.

I think what happens in these mold infections is that they originally infect some mucous membrane. Then the mycoplasma component is able to travel up the nerve endings or perhaps smolder there like the herpes virus in shingles and in fact to my mind I don't see much of a distinction. I now find all manner of neurodegenerative conditions like MS to ringing ears and blurring of vision. The results of my experience with these three types of infections i.e.; parasites, fungal/mycoplasma, bacterial/ viral, has been to conclude that the concept of autoimmune disease is largely incorrect. If one has the tools, and endeavors to look for an infection of some sort, you will usually find one in what has been deemed to have been an autoimmune condition.

I included the mycobacterium in the list of mycoplasmas even though they could be a different entity. However there exist examples in nature where molds blend themselves with other cells of which lichen is a member. Initially they patterned to some fungus species and I continued with those findings. They show up occasionally, so we may be seeing a unicellular blend. There have only been 200 or so total mycoplasmas discovered and only about 30 coding sequences provided, so I imagine there are many loose ends if many fungal species have this capacity to evolve mycoplasmas.

MYCOPLASM AND CORRESPONDING FUNGAL LIST

1 Mycobacterium Avian intercellular (N095) + Absidia corymbigera (L828)
2 Mycobacterium castri (T227) + Microsporium glypsium (In Dr Liebo kit)
3 Mycobacterium chelonei (T913) + Nigrospora mic (N462)
4 Mycobacterium fortuitum (B913) + Cephalosporium (Q649)
5 Mycobacterium gordonae (T902) + Microsporia canis (D745)
6 Mycobacterium Kansas II (T766) + Sporobolomyces (N995), (G083)
7 Mycobacteriummarinum (T823) + Trinchoderma lignorum (B867)
8 Mycobacterium paratuberculosis (N016) + Stemphylium Botryosum (L903), (F219)
9 Mycobacterium scrofulaceum (N916) + Actinomycosis (F691), (G112)
10 Mycobacterium terrae (T788) + Candida tropicalis (D735)
11 Mycobacterium trivale (T800) + Hormodendrum horedii (In Dr Liebo kit)
12 Mycobacterium ulcerans (T777) + Ocomtcosis (F857)
13 Mycobacterium xenop (T856) + Candida lusitaniae (M623)
14 Mycoplasma (K261) + unknown species personally collected killed by " Rue"
15 Mycoplasma bovis (C296) + Trichophyton mentagophytes (T046)
16 Mycoplasma fermentans (T698) + Brewer's yeast (buy a packet) this is dimorphic with Geotricum candidum (H004) + experi. Derived myco (T798)and (T912)
17 Mycoplasma fermentans incognitis (N084) + Cunninghamella elegans (O838), (E831)
18 Mycoplasma genitas (T654) + Rhizopus nigrans (Q260), (F343)
19 Mycoplasma hominus type 1 (N872) + Chatobeum globosum (G333)
20 Mycoplasma hominus type 2 (N883) + Alternaria tenius (M674), (H002)
21 Mycoplasma incognitus (B766) + Poria vulgaris (M566)
22 Mycoplasma orale (T507) + Scopulariopsis (M632)
23 Mycoplasma penetranas (T676) + Cladosporium cladosporides (O906)
24 Mycoplasma pheumonia (D649), (T799) + Rhizopus stilonifer (in Dr Liebo kit)
25 Mycoplasma pirum (T586) + Scatolum (D195)
26 Mycoplasma salivarium (T709) + Mucormucedo (P435), (C300)
27 Nanobacteriumsanguinium (O917) + Mucormucedo plubens (G244)

28 Tuberculinum (C515-7) + Verticullium albo atrum (I854), (F515)
29 Tuberculinum avis (C603) +Helminthosporium sativum (G975)
30 Tuberculinum dents (C271) + Trichophyton schoeleinii (K079)
31 Tuberculinum rosen (N725) + Corn smut (O567)
32 Ureaplasma (L238) + Fusarium oxysporium (R764)
33 Tuberculinum kent (C569) + Epidermophyton floccosum (T992), (F591), (E092)
34 Tuberculinum klebs (C679) + Trichophyton rubrum (T823)
35 Tuberculinum kock (C359) + T.O.E. Mix from Crystal Labs (usually Kudzu)
36 Tuberculinum marmorek (C858) + Cryptococcosis neoformans (D681)
37 Tuberculinum residium (N848) + Penicillum mix (L587)
38 Leprosy (E215), (D368) + ?
39 Experi derived (T681) + Baker's yeast (get sample)
40 " (T845) + Candida sitophilia (M780)
41 " (L244) + Fusarium arium (I538)
42 " (N871) + Botrytis cinerea (F270)
43 " (K281) + Aspergillos barbae (R606)
44 " (T694) + Histoplasmosis (F869-70)
45 " (C585) + Mucor muceddo racemosus (P435), (C300)
46 " (T776-9) + Candida albicans (G150 important in CA.
47 " (C615) + candidiasis (G565) important in CA
48 " (K301) + Aspergillous mucoroides (N049)
49 " (T897) + Phycomyces blakeslecanus (F733)
50 " (T776) + C . stellatoidium (M656), (M645)
51 " (N875-6) + Chatobiumindicum (H008)
52 " (T214) + coccidiomycosis (G728)
53 " (L244) + Fusarium arium (538)
54 " (C594) + Helminthosporium maydis (G080)
55 " (N011) + Chromomycosis (G906)
56 " (N706) + Candida albicans (G150)
57 " (N871) + Penicillin lutium (F809)
58 " (C299) + Schimmalpilzi II (V078)
59 " (N091) + Streptomyclesgriseus (F313)
60 " (B738) + Taenia (L502)
61 " (T827) + Trinchomonalfloar (T722)

FUNGUS LIST WITH KNOWN MYCOPLASMS, SUSPECTED HORMONE GENERATION AND HERBAL TREATMENT

1 Absidia corymbigera (L828), myco 1 (N095), Yarrow
2 Actinomycosis (F691), (G112), myco 9 (N916), 16 hydroxyestrone, Strawberry Leaf
3 Actinomyses Israel (E068)
4 Agaricusmuscarius (H605), Serum Thymic Factor, Lemon Balm
5 Alternaria tenius (M674), (H002), myco 20, corticotropin releasing factor, Usnea/Spring Violet
6 Aspergillosis (F868), Spikenard
7 " auricularis (R911)
8 " barbae (R606), myco 42 (K281), 11 deoxycorticosterone, Hops
9 " bouffardi (I856), Spikenard
10 " clavatus (I548), (G149), Hops
11 " concentricus (R944)

12 “ fischeri (R909)
13 “ fumigatus (R854), (G830), 17a hydroxy, pregnenalone, Bitter Mellon/Tumeric
14 “ glaucus (R617), (F217)
15 “ mucoroides (N049), myco 48 (K301), Hops
16 “ nidulans (R718), (E665), Sutherlandia
17 “ niger (R754), (F930), corticotropin R. F., Lady Slipper/Spikenard
18 “ ocracum (N028), Sutherlandia
19 “ oryzae (N084)
20 “ parasiticus (N041)
21 “ pictor (T764)
22 “ repens (T729), Sutherlandia
23 “ restrictus (G087), (G078)
24 “ sydown (H003)
25 “ terreus (T742), (E713)
26 “ versicolor (E410)
27 Blastomycosis (F870), testosterone, Etherium Black
28 “ brasiliensis (D485), Virginia Snake Root
29. “ dermatidis (D794)
30 Botrytis cinerea (F270), myco 41 (N871), 4-hydroxyestradiol, Celandine
31 blank
32 “ herbarum (D904)
33 Candidiasis (G565), myco 47 (C615), Red Raspberry
34 “ albicans (G150), myco 46 (T776-9), DHEA, Purple Loose Strife
35 “ glabrata (D498), 2-methoxyestrone, methoxyestridiol, Purple Loose Strife
36 “ guillermondi (M904), myco (T682), 16hydroxyesterone, Red Raspberry/ Purple Loose Strife
37 “ kefir (N544)
38 “ krusei (M522), cortisol’s, estriol, White Oak Bark
39 “ lusitaniae (M623), myco 13 (T856), 2 hydroxyestridiol, Red Raspberry/ Purple Loose Strife
40 “ parakrusi (M270)
41 “ parapsilosis (M781), (M792), 4-hydroxyestriol, Blueberry Leaf
42 “ robusta (D476)
43 “ rugoa (D509)
44 “ sitophilia (M780), myco 10, 39 (T788), (T845), methoxyestridiol, heart burn, Lapacho
45 “ stellatoiden (M656), (M645), myco 46 (T776), Purple Loose Strife
46 “ tropicalis (D735), myco 10 (T788), Blue Vervein
47 Cephalosporium (Q649), myco 6 (649), 2-hydroxyestrone, thymosin, Sundew
48 “ acremonium (F456)
49 “ roseum (Q065), (E666)
50 Chatobium globosum (G333), myco 19 (N872), 11-deoxycortisterone, Golden Thread
51 “ indicum (H008), myco 50 (N875-6), Golden Thread
52 Chromomycosis (G906)
53 “cerebral (F965)
54 blank
55 Cladosporium fulvum (F737), thymopocetin, melatonin, tymosin, prednesalone, Thymus
56 “ herbarum (F917)
57 “ cladosporides (O906), myco 23 (T676), 4-hydroxyestrone, testosterone, lutinizing releasing H., Celandine/ Milk Thistle
58 Claviceps paspali (O542), Pomegranate
59 “ purpurea (O748) “ERGOT poisoning”, Astragalus

60 Coccidiomycosis (G728), myco 52 (T214), Golden Thread
61 Cryptococcus (G727)
62 " neoformans (D681), estradiol, Fennel ?
63 " terreus (F669)
64 Cryptosporidiosis (L846)
65 Cunninghamella elegans (O838), (E831), myco 17 (N084), Thujia
66 Curvularia specifica (F728), (D079), 4-hydroxyesterone, Blessed Thistle/Jewel Weed
67 Cystosarcoma phylloiides (D682)
68 Dermatophilus congolensis (I955)
69 Dermatophytosis (G673), Skullcap
70 Dematium nigrum (F200)
71 Enterphthora mycosis (F866), Cranesbill
72 Epicoccinum purpurascens (T319)
73 " cinnabarinum (K025)
74 Epicoccum sp. (T316), insulin?, Fennel
75 " nigrum (E376)
76 Epidermophyton, "ring worm" (T103)
77 " floccosum (T992), (F591), (E092), myco 32 (C569), 4-hydroxyesterone, FolicleStim. H., Kudzu/Tansey (may be part of a trimorphic group that requires garlic and sanicle)
78 Fomesrimosus (F414)
79. Fusarium arium (I538), myco 53 (L244), Blueberry Leaf
80 " culmarium (I573), Blueberry Leaf
81 " episphaeria (I898)
82 " oxysporium (R764), 4-hydroxyesterone
83 " solani (I507)
84 Tuberosi (S035)
85 Vasinfectum (G254)
86 Geotrichosis (G566)
87 Geotricum candidum (H004), myco 16 (T798), (T912), (poly w/ brewer's), Cleavers
88 Gliocladium fimbriatum (S882), (F810), aldosterone, Coltsfoot
89 Helminthosporium interseminatum (F201), Prickly Ash
90 " sativum (G975), myco 28 (C603), ACTH, dihydrotestosterone, Schizandra
91 Maydis (G080), myco 54 (C594), Cleavers
92 Helvellagigus (D654), UvaUrsi
93 Histoplasmosis (F869-70), (D354), myco 44 (T694), Carpenter Square
94 Hormodendrum Cladosporium (N106), (E667), Thuja
95 " horedii (in DrLeibs kit), growth H., Bitter Melon
96 Lubromycosis (G905)
97 Mercaptan (I281)
98 Microsporium audouni (D336)
99 " canis (D745), myco 4 (T902), methoxyestridiol, luteinizing releasing h., Golden Thread
100 Monilia sitophia (F210)
101 Mucor mucedo (P435), (C300), myco 26 (T709), relaxin, corticotropin releasing factor, 4-hydrox, estradiol, Prickly Ash
102 " plubeus (G244), myco 55 (O917), Prickly Ash
103 " racemosus (G541), (E832), myco 45 (C585)
104 " " fresen (G882)
105 " myosis (G729)
106 Mycetoma (F963), Chickweed

Mycogone (F996), cortisol, substance P, Yerba Santa
" alba (B995)
Mycotic keratitis (F988)
Neurosporacrassa (G081)
" sitophilia (M288), PTH, corticotropin releasing factor, thymopocetin, Thyme
Nigrosporia mic (N462)
Nigrosporia sphaerica (L835), (E872), 2-hydroxyestridiol, Gentian
Nocardia asteroids (T790)-
Ocmycosis (F857), 4-hydroxyestridiol, Korean Ginseng
" oidiodendrum (F202)-
Otomycosis (F966)
Pacilomyces varioti (Q864), (434), Hibiscus
Paracoccodo mycosis (G903)
Pafrakehl (L340)
Penicillum mix (L587), Gentian
" atramenosum (F457)
" biform (G216), calcitonin, " Bloat ", Gotu Cola
" carminoviolaceium (H005)
" digitatum (G151)
" expansum (E682)
" glaucum (F703)
" intricatum (E748), Schizandra
" lutium (F809), myco 58 (N871), Schizandra
" notatum (G082)
" roqueforti (F203)
" roseum (F296) -
Phaeomycetic Cyst (F962)
Phanerochaeta crysporia (P064)
Phoma herbarum (E833), (Phoma mix in Dr. Leb kit tested to dihydrotestosterone and Osha)
" destructive (F546)
Phycomyces blakeslecanus (F733), myco 49 (T897), Dihydrotestosterone, Panacras
Piedra black (H300)
" white (H301)
Pleospora (G255), "itchy btn eyes", Boneset
Plicaria fulva (S495)
Poria vulgaris (M566), myco 21 (B766), He Sho Wu
Protothecosis (F989)
Pullularia pullulans (G292), (S255)
Rhinosporidisis (F964)
Rhizopus arrhizus (Q829)
" nigrans (Q260), (F343), myco 18 (T654), 2-hydroxyesterone, cortisol, Horehound
" stilonifer (in Dr. Leb kit , myco 24 (D649), (T799), epithalamine, chorionic gonadotropin, Spikenard, Prickly Ash
Rhodotorula glutinous (E714), (H030), "constipated", Cranesbill
" rubra (in Dr. Leb kit), Turkey Rhubarb
" mucilagirosa (E095), "gliotoxin", Thyme
Satachybotrysatra (T619)
Saccharomyces cerevisae (F819)

154 Scopulariopsis (M632), myco 22 (T507), ACTH, lutinizing R. H., Bilberry, Sutherlandia/ Caster Oil/ Blessed Thistle
155 “ brevicaulis (E933)
156 Smuts: Barley (G256)
157 “ Bermuda (F297), Bugleweed
158 “ Corn (O567), Thymicfactor, Thymopocetin, Bugleweed, All Heal, Sutherlandia
159 “ Johnson (G335)
160 “ Oat (H011)
161 “ Sorghum (G086)
162 “ Rice (no #, use some real rice), Bugleweed
163 “ Wheat (F234), Bugleweed
164 “ Rye (no #)
165 Shaetomium (R495)
166 Scatolum (D195), myco 25 (T586), corticotropin releasing factor, testosterone, 4 hydroxyesterone, “skin itch”, Maca
167 Schimmel pilzi (M690)
168 “ II (V078), myco 58 (C299), Lady Slipper
169 “ III (M870)
170 Sordariafimicola (G749)
171 Spondylocladium (H006) -
172 “ atrovirens (N050) noradrenalin, 17@hydroxyprogesterone, Stinging Nettle/Gentian
173 “ Sporobolomyces (N995), (G083), FSH, 2-hydroxyestridiol, Male Fern
174 Sporothrix carnis (H308)
175 “ schekii (E169), Golden Thread
176 Sporotrichium pruniosum (N061), “Patulin toxin”, estrogen, Stillingia
177 “ shencki (D833)
178 Sporotrichosis (G907), (E174)
179 Stemphylium botryosum (F219), (L903), myco 8 (N016), cortisol, Bitter Orange
180 “ solani (E749), (l756), myco 8 (N016), “Aflatoxin B1”, estriol, Lomatum/Bitter Orange
181 Streptomycles griseus (F313), myco (N091), aldosterone, Sarsparilla
182 Taenia (L502), myco 60 (B738), 2-methoxyesterone, Strawberry Leaf
183 “ pisiformis (L813)
184 Supportive Chemicals: Thio ether (S449)
185 “ “ Thioanion (S359)
186 “ “ Thio urea (S337)
187 Thodotorula glutinis (S798)
188 “ mucilaginosa (P863), Coltsfoot
189 Tinea metagrophytes (D337), myco 23 (T676), Ashwagandha
190 “ nigra (F687) -
191 “ pedis (T373), Elderberry
192 “ rubrum (D505), methoxyestridiol, Elderberry
193 Torulopsis glabratis (H690), Golden Thread
194 Trinchoderma lignorum (B867), myco 7 (T823), estriol, Spring Violet/Spanish Black Radish
195 “ viride (T801)
196 Trinchomonal floar (T722), myco (T827), Spanish Black Radish
197 Trichomycosis axillaris (G564)
198 Trichophytic (T620)
199 Trichophyton ajelloi (B800)
200 “ anthroderma (T079)

201 “ cutaneium (T878)
202 “ equinum (T890)
203 “ gallinae (T867), Feverfew
204 “ interdigital (K032)
205 “ mentagrophytes (T046) , myco 15 (C296), melatonin, “deoxyscriptenol toxin”, Wild Cherry/Castor Oil
206 “ roseum (K801)
207 “ rubrum (T823), myco 34 (C359), TSH, epithalamine, “fingertip skin cracked”, Chickweed/Evening Primrose (not oil/Pipsissewa/Thyme)
208 “ schoeleinii (K079), 2-methoxyestrone, testosterone, Blue Vervein
209 “ terrestre (K992), testosterone, Wormseed/Bayberry
210 “ tonsurans (T856)
211 “ verrucosum (B992)
212 “ violaceum (T902)
213 Trichosporon (T608), (T620)
214 Trichothecium roseum (T889), pregnenolone, predisolone, aldosterone, may be “trimorphic”, Carpenter Square/Gentian/Damiana/Hibiscus
215 Typhulaidahoensis (E435) -
216 Verticullium albo (I584), myco 27 (I854), corticosterone, Khella
217 “ atrum (I854), (F515), myco 27 (C517), growth hormone, cortisol, Khella
218 Sarcoidosis (E336)
219 Pityriasis versicolor (H299)
220 Aureobasidium (D253)
221 Onychomycosis (K535)
222 Stachybotrys chartarum (C578)
223 Microsporium glypsium (in Dr. Leb kit), corticosterone, Yew
224 Bakers yeast (get a sample), myco (T680-1), “ bloat/flatus”, Peppermint
225 Brewers yeast (get sample), myco 16 (T698 is dimorphic with Geotrichum candidum, will cause cirrhosis and liver s/s as well as be the one who gets “ hung over “ easily, Quackgrass for B. yeast, Cleavers for Geo Cand.
226 Pneumocystis carnii (Dr. Leb kit), 2 methoxyesterone, Flax
227 Microsporium glypsium (Dr. Leb kit), “heart pounding”, Licorice
228 Mucor mix (Dr. Leb kit), T3, cortisol, Prickly Ash
229 Aureobasidium pullulans (Dr. Leb kit), PTH, Astralagus/Burdock
230 Montospora brevis (Dr. Leb kit), leptin, Yerba Santa
231 Aeromenium cephalosporium (Dr. Leb kit), estriol, Schizandra
232 Unknown Mold Personally collected (looked like cottage cheese balls, grew in a damp shaded yard) T3, 11 deoxycorticosterone, “glabelllar fault”, TL Sanicle and American or Korean Ginseng (then ligament stretch reaction will “present” only to be neutralized by the addition of Garlic

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The Resolution of Diplopia in Teen Post Cranial mManipulation

Tyran Mincey, D.C., DIBAK

ABSTRACT:
Objective is to share a case history of a patient with a compliant of a spontaneous diplopia which manifested first as a difficulty seeing the blackboard at school and highlighting an alternative once pathology has been ruled out. Visual complaints are often the result of space occupying lesions but also can be the result functional problems and cranial articular lesions. Once space occupying lesions are ruled out the cranium should be evaluated for dysfunction that could lead to abnormal cranial and neuraxis dysfunction in a local or distal manner.

Key Indexing Terms: Chiropractic, Applied Kinesiology, Cranial Fault, Cranial Sacral Therapy, Herbs, Manual Muscle Text, MMT, Nutrition, Physiological Phenomena, Functional Medicine, Vision, Cranial Nerves, Optic Nerve, Space Occupying Lesion

INTRODUCTION:
The cranial vault is composed of 28 separate bones. These bones all have been demonstrated to have a small amount of movement which unified, creates a pumping mechanism that appears to influence the entire neuraxis and cranial nerve function. Basic gross anatomist hold the belief that the sutures between these bones are immovable therefore in the clinical pedagogy future clinicians are educated as such. In turn they rarely evaluate the cranium of their patients. More commonly clinicians mainly look for gross anatomic pathology. Thus any type of problem that does not demonstrate gross pathology is dismissed as unknown and results in a prescription of coping therapy instead of looking at possible solutions. The number of disorders resulting from abnormal cranial bone movement are many and have been anecdotally reported for many years. These include cranial nerve problems, TMJ, and remote seemingly unrelated health problems, and cranial pain syndromes as well as headache.

Jargon relating to Cranial faults.
Cranial immobility or fixation is also called "a cranial fault" Cranial Manipulation involves applying forces to open or close sutures minutely, or restore movement manually. Neurologic Disorganization

CASE REPORT:
A 14 year old female reported that she was having difficulty seeing the board in class. After several days of having this problems the visual complaint progressed to "seeing two of everything." Accompanying these visual changes were changes in the posture which manifested as a mild cervico-thoracic scoliosis

Using standard medical physical examination of cranial nerves no obvious abnormalities were detected, except for the finding of embellished diplopia on right upper quadrant gaze. Cranial palpatory examination revealed several cranial faults and neurologic disorganization.

As per Walther in The Applied Kinesiology Synopsis, evaluation of the skull for all cranial faults was performed. The revelation was almost all cranial faults looked for were found. These were corrected using specifically determined vectors based on challenge and Walther's standard set in the synopsis. After 6 consecutive days of cranial therapy the vision returned to normal without further recidivism. On day one inspiration assist was corrected with a cervical correction, on day two the cranium was re-evaluated and all faults returned of they were corrected again. On day three, A spheno-basilar flexion restriction was noted and corrected, after which the patient noted some improvement. On day four, internal and external faults were corrected. On day five, glabellar and universal faults were corrected. And finally on the sixth day sutural corrections were made paying close attention the right orbit. Follow-up corrections were also made with the "Eyes in distortion" in right upward gaze. New corrections were made daily with almost not recurrence of the previously corrected faults.

DISCUSSION:

There are many different types of cranial related therapies but they all have the end goal of the restoration of normal motion to the cranial vault. Standard Applied Kinesiology cranial management involves challenging and muscle weakness patterns as an indication of cranial fault.

Since the writing of Sutherland's "The Cranial Bowl" in 1910 the art and science of cranial manipulation has been practiced. Dr. George Goodheart et. al. picked up on the ability of us to challenge using a muscle to tell us if a cranial fault was present. Prior the advent of manual muscle testing the practitioners based all treatment on "feeling" a lack of movement. Muscle testing took away the dependency on palpation to determine a faults presence. Even more standard, certain muscle weakness patterns were also identified and correlated with certain faults.

Our management consisted of following standards sets by the ICAK per Walther's Applied Kinesiology Synopsis. Several standard muscle tests were used.

Because a cranial fault can mimic many health concerns such as headache, TMJ, eye pain visual changes and other unexplained sight and cranial nerve problems such as bell palsy, we need to make sure a proper searching examination is done to indentify local cranial pathology. If needed or pathology is suspected appropriate diagnostic testing should be ordered. This helps in the process of differential diagnosis. Once, or concurrent with these tests being negative the clinician should proceed on to a complete cranial evaluation and correction of any and all of the patients "faults."

CONCLUSION:

The Cranial Fault is a condition that can cause small focal deficits in function of locally impacted structures such as cranial nerve, TMJ function and neck subluxation and poor function, and at the same can cause distal symptomology relating to the large bowel, or function of any muscle in the body. Clinicians must add knowledge of the malady to their armamentariums so that can make an appropriate referral to an Applied Kinesiologist who can perform standard management of this condition.

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Case Study: Sacroiliac Pain Following Head Trauma

Luke Pietrantone, D.C.

ABSTRACT:
Objective: To describe the use of Applied Kinesiology in the management of sacroiliac pain that developed after a head trauma in a 48-year-old female runner.

Clinical Features: The patient was in a waterskiing accident where the tip of the water ski hit her skull on the left occiput and lamdoidal suture causing a 1.5-inch long laceration. Two weeks later the patient developed right sacroiliac pain that made it difficult for her to run due to increasing pain down the right leg to the knee. The patient presented to the office 4 months following the onset of the sacroiliac pain because she could no longer run.

Intervention and Outcome: Applied Kinesiology methods were used to diagnose and treat the skull trauma as the primary source of dysfunction, resolving the sacroiliac pain with little treatment directed toward the pelvis. The patient had resolution of symptoms and returned to running without restrictions 1 week after the first treatment.

Conclusion: Past traumas can be the primary reason for dysfunction in the body even if at first they are seemingly unrelated. All recent traumas should be evaluated as potential sources of dysfunction. Applied Kinesiology is a useful tool in determining the relevance of past trauma to a patient's presenting symptomatology.

Key Indexing Terms: Therapy Localization, Applied Kinesiology, Cranial, Sacroiliac, IRT (Injury Recall Technique), Chiropractic

INTRODUCTION:
A 48-year-old woman presented to the office complaining of constant right sacroiliac pain that radiated down the posterolateral aspect of her thigh stopping at the knee. The patient related the pain as a 3/10 that escalated when she ran. She is a fit individual who works out regularly and runs 4 times a week for 3 miles. There was no change to her workout regimen prior to the onset of her symptoms. The pain started insidiously 4 months before and she was eventually unable to run due to this pain. Her diet is mostly free of processed foods and after further discussion she seemed to be balanced emotionally. When pressed about any other injuries she may have suffered, she mentioned a water skiing accident two weeks prior to the onset of the sacroiliac symptoms. In the accident the tip of the water ski hit the back of her head with enough force to cause a 1.5-inch laceration that needed 32 stitches. A persistent numbness in a 3-inch circle surrounding the cut was also reported. This numbness was improving but still evident when she presented to the office. The patient noted there was some mild cervical pain that lasted for 3 to 4 days after the accident. However, she did not have any pain in the neck when she presented to the office. The patient experienced no back or pelvic pain at the time of the accident. The only other treatment the patient had sought was 2 sessions of massage on the low back and hip. This treatment helped on the day of the massage but then the pain returned.

EXAMINATION:
Postural evaluation revealed an elevated left occiput and pelvis that was rotated left. Manual muscle testing revealed inhibition of the following: bilateral glut max, bilateral hamstrings, right sartorious, right TFL, left adductor, left SCM, left upper trap. Trigger points were noted in the left scalenes and right glut max. Spinal examination revealed a Category II on both sides with the left being posterior inferior and the right anterior superior, left inferior occiput and right posterior atlas. The left inferior occiput was found with the EID pattern up and to the left as described by Francis. Cranial examination revealed a left forced expiration assist, left temporal buldge and a right nasosphenoid fault. All other cranial faults were absent. Testing for K27 switching was negative as well as cross K27 switching. With the head in extension Injury Recall Technique (IRT) was found to be necessary over the entire left side of the head as well as the front and back of the neck.

Therapy localization (TL) to the scar and over the occiput resulted in strengthening of the right sartorius and TFL. The bilateral glut max facilitated to TL of C1 and C2. The bilateral hamstring weakness did not strengthen to the low back or pelvis but to the C7/1st rib articulation indicating a bilateral limbic fixation. This was not unreasonable considering the bilateral Cat II causing torsion of the shoulder girdle and the prior trauma to the head.

All motor and reflex testing was unremarkable for the upper extremity. Lumbar ROM showed increased referred pain down the right posterolateral thigh with flexion. Cervical ROM showed right rotation reduced to 65 degrees without pain.

TREATMENT:
At the first visit IRT was performed which negated the TL to the scar and facilitated the right sartorius and right TFL. All other findings remained, however. The pelvis was blocked supine and mobilized with the assistance of the legs. Adjustments were made to the left inferior occiput, right posterior C1, bilateral C7/1st rib fixation and left posterior L5. These adjustments facilitated the bilateral glut max inhibition and the bilateral hamstring inhibition. The left temporal buldge, left-forced expiration assist and right nasosphenoid were adjusted as well, which facilitated the left SCM and the left upper trap. The patient's cervical ROM improved to normal but she still noted some pain down the right posterolateral thigh with lumbar flexion. The patient was instructed not to run but go for several long walks to help integrate all the treatment she had received.

The patient returned 4 days later for a follow-up appointment reporting the pain no longer referred down her leg and was only in her glut max. She also reported that she ran 3 miles, 2 different times without pain. She described an "odd feeling" in her head that went away, but she had not realized it was even there until it was gone. Examination revealed Cat II with a right AS ilium and left posterior L5 subluxation. There was a strain/counterstrain of the right glut max and inhibition of the right piriformis which TLed to L5 and strengthened after it was adjusted. Left hamstring inhibition TLed to the left C7/1st rib articulation and was facilitated after it was adjusted. All other previous findings remained resolved.

The patient returned 3 days later reporting no pain in the buttock or leg. The patient also noted she was able to run pain free and felt strong running under 10 minutes per mile for the first time since her symptoms started. Examination revealed a Cat II on the right with an AS ilium. There was a strain/counterstrain of the right glut max which resolved the AS ilium after the patient walked for 1 minute. All gait testing and PRYT was negative. The patient was released to return if her symptoms re-emerge.

The patient noted complete resolution of symptoms in later communications and returned fully to running and working out.

DISCUSSION:
Goodheart's discovery of therapy localization enables the examining doctor to find the primary cause of dysfunction very quickly. Therapy localization is when a strong indicator muscle becomes inhibited while an area of dysfunction is touched or when an inhibited muscle is facilitated while a related area of dysfunction is touched. It was easy to demonstrate to the patient how the hamstring inhibition was coming from her C7/1st rib when she touched the joint and her hamstring strengthened dramatically. In this case therapy localization showed the primary problem to be the head and neck creating or perpetuating imbalances in the pelvis. Therapy directed only at the pelvis would have failed because almost all the pelvic muscle dysfunction had origin in the head and neck.

Often patients do not see how past injuries relate to their current complaints, but it is useful to do a review as these past injuries may be relevant. This patient was not going to mention her accident because it had happened "so long ago" in her mind. Injury Recall Technique is a very useful technique to remove traumas that have been encoded into the nervous system. IRT for the head and neck uses a light flexion of the cervical-occiput area while the area

of injury is TLed. IRT often improves many more findings and muscle inhibitions than it did in this case. It may however, have reduced the chances of recidivism of the cervical and cranial findings.

A common finding in practice is a contralateral occiput subluxation causing inhibition of some or all of the muscles surrounding the hip. If it recurs, the cause must be discovered. The list of causes for an occiput fixation is long and can originate from any side of the triad of health: structural, chemical, or emotional. In this case the cause was structural from the initial injury. The patient's generally good nutrition and emotional stability before and after the accident allowed a quick result. Certainly, an overlay of poor nutrition or mental stress would have extended her treatment and increased recidivism of her initial findings.

CONCLUSION:

Therapy localization can lead the doctor to the primary source of dysfunction very quickly. The diagnosis methods and treatment techniques described in Applied Kinesiology can significantly reduce the time a patient needs to recover from injury.

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Methylation and the Physical Exam: Applying Physical Phenotypes to Clinical Practice

Andrew Rostenberg, D.C.

ABSTRACT:
An approach is presented for clinicians to address methylation defects through recognition of specific physical phenotypes found on the physical exam. Current research evidence is reviewed in support of the close relationship between methyl donor status, inherited genetic polymorphisms, and tissue shape and symmetry. A functional model of methylation-related genetic diseases and their corresponding physical phenotypes is presented. Important physical exam findings are discussed.

Key Indexing Terms: Methylation, Epicanthal Folds, Congenital Birth Defects, Single Nucleotide Polymorphisms, Scoliosis

INTRODUCTION:

We are carbon-based organisms and methylation is one of the most important processes in the human body. This process of one-carbon metabolism is ubiquitous, and when disturbed, creates widespread biochemical imbalance. Methylation defects range from minor biochemical changes to major physical, chemical, and mental disturbances. Due to the fact that methyl reactions are central to our biochemistry, it follows that abnormalities in such an important pathway would show up on the physical exam. This paper intends to highlight specific physical exam findings that have a strong relationship to methylation cycle imbalances. By reviewing the etiology of common methylation problems, a comprehensive list of methylation phenotypes is provided as a screening tool for identification on the physical exam.

Overview of the Methylation Phenotype

Dr. Robert Rakowski, DC, correctly points out that "if there is something wrong on the outside, then there is something wrong on the inside." Methylation issues fit this concept well as we shall see. Essentially all inherited methylation issues result either from a single nucleotide polymorphism (SNP), such as MTHFR, MTR, PEMT, etc., or from a gamete or zygote that has an extra chromosome.[1] Since the basis for methylation weakness is genetic, it is from our parents that these methyl issues are passed down. Targeted nutritional supplementation can saturate pathways and create a healthy biochemical environment that overcomes these genetic weaknesses.

The aim of this paper is to illustrate that all mid-line congenital defects such as congenital heart malformation, spina bifida, cleft palate, scoliosis, arachnodactyly, hemivertebra, hypertelorism, epicanthal folds, etc. are fundamentally methylation issues. In fact, this author suggests that all congenital limb length discrepancies, malformed organs, and basically all congenital defects which produce a deviation from typical human symmetry are due to methylation issues. As tissues grow and cells divide, if there is a deficit of methyl donors, some tissues may grow faster than others creating a deviation from the original "human blue print". A recent paper from Bio Med Central illustrates this point clearly:[2]

> *Folate metabolism can influence the final form of any growing tissue due not only to its participation in nucleic acid synthesis, but also to its known function in regulating DNA and protein methylation*.

If methyl donors are not functionally adequate during intensive cell division, then there is a high likelihood that tissue formation will be incomplete and asymmetrical. This phenomenon may occur during sex cell division, gestation, childhood, and/or puberty. During gestation these functional deficiencies may result in life threatening congenital defects or chromosomal aneuploidy leading to a host of serious genetic diseases. However, if these functional deficiencies arise later during childhood and puberty, the defects may be more physically subtle but still have a profound effect on all aspects of the triad of health.

Gestation and Fetal Development

The most serious and rare methylation problems occur when a sex cell gamete ends up with an extra chromosome leading to lifelong genetic disease. Failure to properly methylate at this early stage can have disastrous consequences on the outcome of the pregnancy, and often results in miscarriage. If the gamete fails to divide correctly, whatever errors occur will be passed on to each of the roughly 100 trillion cells that follow. As women age their ability to methylate declines which increases the risk of birth defects such as spina bifida, Down's syndrome and other genetic diseases.[3,4] Also the risk of miscarriage increases with maternal age, further highlighting this relationship between maternal age, methylation status, and healthy pregnancy.[5]

The most common scenario is a lack of methyl donors in the mother's diet, often in combination with genetic SNPs from one or both parents, which causes any number of congenital abnormalities to form in utero. A lack of methyl molecules in the cellular environment may cause faulty division of somites or slow cell division of germ cells leaving certain tissues incomplete upon birth. The presence of MTHFR and other SNPs in the mother correlate with rates of Autism, Down's, Marfan's, and Klienfelter's syndrome - with each condition expressing a unique physical phenotype.[6,7,8,9] Additionally, children born with cleft palates, malformed organs, and neural tube defects occur at higher rates in women with methylation SNPs.[10,11,12] In fact the most common birth defect is spina bifida, which is widely known to be prevented by adequate intake of the primary methyl donor folic acid.

This link to methylation during gestation is further confirmed by research which indicates that women with the highest intake of methyl donors give birth to the least amount of congenitally defected children.[13] In addition, mother's who consume high levels of methyl donors before and during pregnancy significantly reduce their risk of having a child with Down's syndrome, Autism and neural tube defects.[14,15,16] The fact is that methylation is critical to normal development and health in utero. The question is whether or not the mother can provide enough methyl donors through her challenged pathways to ensure proper cell division and thus health of her child. The phenotype of the child ultimately rests on assuring adequate methyl donors in the womb to overcome any genetic weaknesses in the methylation cycle.

Childhood, Puberty and Beyond

A child born to parents with genetic methyl weakness may not be born with any visible signs of malformation. Only after tissues begin to mature and grow during childhood and puberty might the methylation problem manifest itself on the physical exam. Methyl groups are needed in higher amounts during periods of rapid growth and functional deficiencies might arise during this time. If a pathway is slow genetically and intake is not adequate, then there is a risk for asymmetrical cell development which can alter the final form of tissues. Methylation pathways are also critical for glutathione production as well as heavy metal and xenobiotic excretion. Individuals with a genetic tendency towards imbalanced methylation will be more sensitive to environmental toxins and will suffer more oxidative tissue damage. Exposure to toxins causes loss of methyl donors making a depleted state even worse. Since our modern environment is saturated with xenobiotics, metals, and other toxins, it is a virtual guarantee that individuals with slow pathways will manifest some form of tissue abnormality on the physical exam.

Many children present for chiropractic care with limb length inequality, scoliosis, spina bifida occulta, hemivertebrea, transitional segments, etc. which are discovered upon routine x-ray analysis. Each of these common abnormalities are simply outward manifestations of methylation defects during gestation, childhood, or puberty. As a child grows into an adult and the skeleton grows to full size it becomes easier to clinically identify methylation markers. For example, scoliosis and/or hemivertebrae may not be clinically evident or relevant until a child approaches adult size. This structural distortion may be asymptomatic at age five but when that child grows into a teenager, it may manifest as pain or postural imbalance. Also, limb length discrepancies may not show themselves until limbs reach adult length. By taking note of these common variants and asymmetries on the

physical exam, clinicians can learn to quickly identify which patients are in need of targeted methylation support.

The Physical Exam

Clinical outcomes can be improved by focusing attention upon specific and distinct physical exam findings which are clear indications of methylation cycle abnormalities. Table 1 summarizes the relationship between genetic disease, methylation deficiency, and distinct physical phenotypes. The diagnostic physical exam findings are key clinical phenotypes for identifying which patients need to be screened for methylation support nutrients.

Table 1: Genetics, Deficiency, and Physical Phenotypes

Genetic Disease or Deficiency	Diagnostic Physical Exam Findings
Down's syndrome	congenital heart disease, epicanthal folds, simian crease
Marfan's syndrome	scoliosis, pectus excavatum, and arachnodactyly
Klinefelter's syndrome	gynecomastia and female body shape
Fetal Alcohol syndrome	hypertelorism and low set ears
Autism Spectrum	wide upper face, mouth, orbits diminished height of maxilla and philtrum flat nasal bridge
Neural Tube Defects	spina bifida, arnold-chiari malformations, cleft palate
General Methyl Donor Deficiency	hemivertebrae, transitional segments, limb-length discrepancies, posterior ponticles

The key here is to maintain a functional perspective when screening patients. While most patients will not have a diagnosed genetic disease or condition listed above, many will share the same genetic polymorphisms and physical exam findings as those with more serious disease. For example, a patient may not have Marfan's disease, but they may have a Marfanoid phenotype with pectus excavatum and very long, slender fingers creating a functional arachnodactyly. Carrying such a phenotype should alert the clinician that the same methyl disturbance that causes genetic disease is present, albeit at a lesser degree. This is a signal for the clinician to provide methyl donor nutrients - namely 5-MTHF, B12, trimethylglycine, SAMe, taurine and choline - in order to reduce the relative risks associated with the phenotype.

The most useful physical marker is the epicanthal fold which can be seen with the naked eye. In many cases however, a functional epicanthal fold exists, which can only be detected through a specific tissue challenge.

Dr. Jeff Brist, DC, shared with this author an excellent challenge technique for screening all patients for a functional epicanthal fold. Figure 1A shows a typical epicanthal area of the right eye without a fold. At first glance this patient would be assumed to not have an epicanthal fold and thus not be at a higher risk for methylation-related problems. Figure 1B demonstrates the epicanthal challenge which provokes the epicanthal tissue and uncovers the hidden, functional epicanthal fold (black arrow). As research has consistently shown, if there are methylation markers on the outside of the body, then there are biochemical parallels inside the body. The epicanthal challenge fits this paradigm well and should be considered a routine screening tool for every patient since methylation issues affect all sides of the triad of health.

Epicanthal Challenge

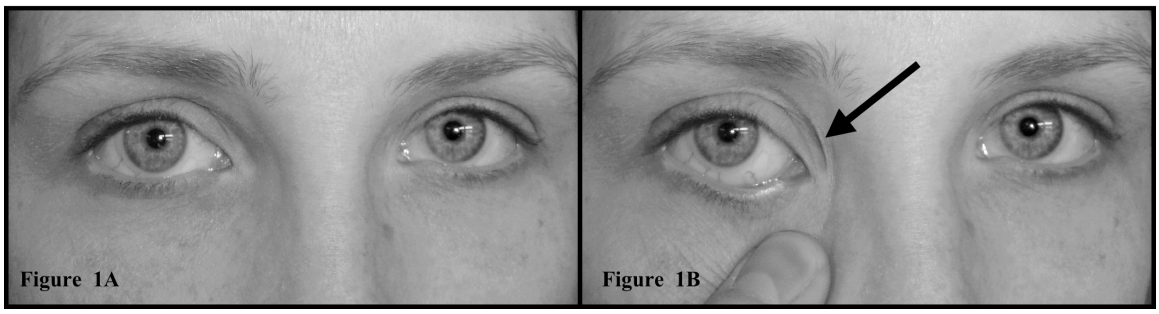

Figure 1A

Figure 1B

This challenge is performed by a digital contact over the skin of the medial orbit just inferior to the lacrimal bone (Figure 1B). The doctor pulls the skin in a caudal and slightly lateral direction to effectively tighten the skin of the epicanthal area. This skin tension will reveal functional, occult epicanthal folds on many individuals, indicating a need for methyl donor support.

By recognizing the physical phenotypes above clinicians are able to identify which patients are at a higher risk of methylation-related conditions such as depression, heart disease, stroke, and cancer. The presence of any of the diagnostic physical exam findings from Table 1 should alert the clinician to investigate further the methyl status of the patient using applied kinesiology techniques and health history questionnaires.

CONCLUSION:

Methylation cycle abnormalities may cause a person to carry a unique physical phenotype related to methylation genes. These physical variations are routinely seen in the chiropractic office and in clinical practice in general. The presence of any one of these methylation phenotypes should alert the clinician for a need to address methyl donor nutrients in that patient. Clinicians will be able to provide a higher level of care and reduce the risk profiles of their patients by addressing these weak pathways. Applying these methyl phenotype strategies to the physical exam improves clinical outcomes and can reduce the need for expensive and time consuming lab testing.

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I would like to thank Dr. Jeff Brist, DC, for sharing with me the technique for screening patients for an epicanthal fold. I would like to also thank Dr. Robert Rakowski, DC, for his relentless pursuit of clinical knowledge and for educating students, doctors, and patients everywhere.

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Diagnosis and Treatment Protocol for Health Problems from Hidden Phenol, Formaldehyde, Heavy Metals and Microbes Possibly as a Result of a Vaccine(s) Shot into Acupuncture Meridian(s)

Wesley Sheader, D.C., D.I.C.C.P.

ABSTRACT:
OBJECTIVE: How to find hidden phenol, formaldehyde, heavy metals (aluminum, cadmium and mercury), and microbes in acupuncture meridians. These are components found in vaccines.

CLINICAL FEATURES: The common injection sites for vaccines are the lateral thigh and buttocks where the Gallbladder Meridian flows through, and the upper arm where the Triple Heater, Lung, and Large Intestine Meridians are found. Symptoms or conditions that may be related to a vaccine reaction, chemical and/or heavy metal toxicity, and/or meridian dysfunction: failure to thrive, fevers, seizures, poor weight gain, Autism, Asperger's Syndrome, fever, chills, irritability, crying, high-pitched cry, behavior changes, allergies, difficulty breathing, hoarseness, wheezing, hives, paleness, weakness, fast heartbeat, dizziness, frequent colds, poor appetite, apnea, arching back, poor sleep, runny nose, congestion, dark circles, matted eyes, pale, lethargic, systemic or recurrent yeast infections, UTIs, developmental delays, hypotonia, joint pain, headaches, speech delays, gallbladder problems, fibromyalgia, chronic pain/fatigue.

METHODS: Flushing the meridian by rubbing over entire meridian allows for phenol, formaldehyde, heavy metals (aluminum, cadmium and mercury) and microbes to show up on testing when prior testing was negative. Treatment consists of flushing the meridian followed by chelation and/or detoxification therapies.

RESULTS: Improvement and/or resolution of symptoms. A return of these symptoms, chemicals, metals, or microbes has not been observed after performing this technique.

CONCLUSION:
This technique opens up another path for clinicians and researchers to pursue when dealing with a patient's health problems. Further investigation is needed with any substance injected into a meridian resulting in dysfunction or ill health.

Key Indexing Terms: Vaccine, Immunization, Meridian, Acupuncture, Autism, Asperger's Syndrome, Failure to Thrive, Seizures, Fibromyalgia, Mercury

INTRODUCTION/OBJECTIVE:

How to find hidden phenol, formaldehyde, heavy metals (aluminum, cadmium, and mercury), and microbes in acupuncture meridians. These are components found in vaccines (1). This paper discusses the possibility of a vaccine being injected into an acupuncture meridian resulting in ill health. In infants, the left lateral thigh or buttock is the most common sites for vaccine injection. The Gallbladder Acupuncture Point 31 and 30 is found in these areas, and there is a possibility of the vaccine occasionally getting injected directly into the Gallbladder Meridian. In adults, the upper arm is the most common site for vaccine injections. The Triple Heater, Lung and Large Intestine Meridians go through this area of the arm. Considering all the chemicals/metals/microbes (dead or alive) found in vaccines (1), they have the possibility to create health problems no matter where or how they are put into a body.

Prevalence of vaccine reactions is unknown. It has been estimated that only one to ten percent of all possible vaccine reactions are reported to Vaccine Adverse Event Reporting System (VAERS) (2). Practitioners should

gather information related to their patients' health problems and see if the timing of the symptoms was within 42 days after a vaccine was administered (1). Subsequent vaccine reactions are usually increasingly severe. The most common second reaction seen in this practice is a return or worsening of previous health problems and/or development of seizures or tics.

Autism Spectrum Disorders (ASDs) have been linked to vaccines (3). According to the most recent study by the Center for Disease Control and Prevention, statistics on ASDs rates have been increasing at a rate of 10-17 percent each year, affecting at least 1 in 110 children, and accounting for 1% of America's youth (4). The financial impact to care for an autistic person over his or her lifetime is estimated at $3.2 million; caring for all people with autism costs an estimated $35 billion per year (5).

CLINICAL FEATURES:

Patients of any age who have received a vaccination shot in the lateral thigh, buttocks, and/or upper arm may have any of the following symptoms or conditions related to a vaccine reaction, heavy metal toxicity and/or meridian dysfunction: failure to thrive, fevers, seizures, chills, irritability, crying, high-pitched cry, behavior changes, allergies, allergic reaction, difficulty breathing, hoarseness, wheezing, hives, paleness, weakness, fast heartbeat, dizziness, poor weight gain, Autism, Asperger's Syndrome, frequent colds, poor appetite, apnea, arching back, poor sleep, runny nose, congestion, dark circles, matted eyes, pigeon toed, pale, lethargic, subluxations, cranial faults, adrenal fatigue, systemic or recurrent yeast infections, UTIs, developmental delays, hypotonia, joint pain, headaches, speech delays, gallbladder problems, fibromyalgia, and/or chronic pain/fatigue (1). Anyone who has these symptoms should be screened with this protocol. This method allows an examiner to discover hidden toxicities and remove them.

METHODS:

There are two screening tests. One is to therapy localize over acupuncture meridian points that are in the proximity of vaccine injection sites, such as Gallbladder (GB) 31 (most common) and GB30, Triple Heater (TH) 13 (2nd most common), Lung (LU) 3&4, Large Intestine (LI) 14, and test a strong muscle. Weakening of the strong muscle may indicate a problem in the meridian. The second screening test is to find a weak muscle in the clear that is related to one of these meridians, i.e.: Gallbladder- popliteus, Triple Heater-*infraspinatus, teres minor,* Lung-*Levator Scapula, Serratus Anticus, Deltoid, Coracobrachialis, Large Intestine-Hamstrings TFL Quadratus Lumborum (6)*. This may indicate the need to flush the meridian(s). The screening methods above reveal most of the patients who have this problem. However on some patients you must first flush the meridian to find the hidden toxicities. If either is found, **1.** Flush the meridian by rubbing at least five sweeps (this can be done in sections) from the beginning of meridian to the end (i.e. GB1 to GB44, TH1 to TH 23, LU1 to LU11, LI1 to LI20). The patient may have tender areas. The most common tender areas are: GB31 and between GB21 and 22, TH13, LU3, 4 and 5, and LI14. Sometimes infants and children become agitated when flushing these meridians. **2.** Test for phenol, formaldehyde, heavy metals (aluminum, cadmium and mercury), and microbes. Start immediately on chelation or other detoxification therapies to clear any chemicals/metals/microbes that are found. If the patient does not do chelation or other detoxification therapies, he/she may feel worse. Typically it takes two to three weeks to clear phenols, formaldehydes, heavy metals, and/or microbes. It is common to see improvement of symptoms over that 2-3 week time.

The following alarm points will therapy localize after flushing the meridian(s) when microbes are found: LU1, LU, CV24, LV13, GB25. You will need re-flush the meridian in the opposite direction (end point to beginning point), then rub LU5 for 20 seconds then LV8 for 20 seconds. This will negate positive TL(s) on alarm points. Finally finish with stimulating points for GB tonification points (6). If microbes are found, send the patient home with a copy of involved meridian(s) to rub (with at least five sweeps) from the end point to the beginning point and instructions to rub LV8 for 20 seconds, two times per day. Have patient take a proteolytic enzyme containing

bromelain, or have them eat papaya multiple times per day to help clear microbes (7). Continue this protocol until microbes no longer test positive (typically 2-4 weeks). Desentization technique such as master set points, IRT, TBM, or NAET also seems to help improve symptoms.

RESULTS:
Typically, some if not all of the patient's symptoms start to fade over two to three weeks while they are taking their supplements for chelation and detoxification. A return of these symptoms, chemicals, metals, or microbes has not been observed after performing this technique. This technique has been utilized on infants and adults with equal success. However, the smaller the patient, the longer it usually takes to clear up microbes. In infants it can take over four weeks to clear. In severe cases, the patient may have bouts of swelling, rashes, fussiness, and fevers during those four weeks. If this happens, Vitamin C helps to relieve these symptoms.

DISCUSSION:
The hypothesis is that a vaccine can be injected directly into a meridian, where it is encased in the meridian and slowly leaked out into the main circulation. This may be what causes the symptoms and the findings on some patents where phenols and metals keep showing up or are resistive to chelation or other detoxification therapies
This has been even found on numerous patients, including those who initially tested negative to phenol, formaldehyde, heavy metals (aluminum, cadmium and mercury), and microbes. After flushing the meridian(s) by rubbing, they now test positive for phenol, formaldehyde, heavy metals (aluminum, cadmium and mercury), and/or microbes. This technique creates awareness of the possibilities of negative effects associated with injecting medications, vaccinations, and recreational drugs into any acupuncture point. This technique also suggests that the acupuncture meridian may be more than just an energy channel and that it may consist of an actual space for these toxins to be stored, or that flushing meridian causes a release of these substances from other locations within the body. Rubbing these points seems to help release toxins into the main circulation, where they can be effectively removed by chelation or other detoxification therapies. With slight modifications to this technique, one could test and treat for any toxin/chemical/medication/drugs that have been injected into any acupuncture point. This technique may also explain why some patients do not respond, or do not have lasting response, to chelation therapy for heavy metals, phenols and formaldehydes. This also may explain why some patients that you would expect to test positive for heavy metals, phenols, and/or formaldehydes do not. A study is needed to see correlations using other methods of testing phenol, formaldehyde, and heavy metal (i.e. Hair Analysis, Porphyrin Analysis Test, Stool Test For Heavy Metals, DMSA Challenge Test, Environmental Toxin Testing, Gas Chromatography/Mass Spectrometry, etc.) prior to and after utilizing this technique (minus the supplementation), and then test it again after three weeks of supplementation. A study is needed showing blood tests prior to flushing meridian then immediately following flushing meridian to see if microbes show up on second test that did not show on the initial test.

The more severe the symptoms are, the more likely the patients will test positive for phenols, formaldehydes, heavy metals and/or microbes after flushing the meridian(s). However, patients with mild symptoms may still test positive with phenol, formaldehyde, heavy metal, and/or microbes after flushing these meridians. This technique allows for more thorough testing and treatment for vaccine reactions. Vaccine reaction signs and symptoms include: fever, chills, seizures, failure to thrive, irritability, unrelieved crying, high-pitched cry, behavior changes, unusual shock-like syndrome, and/or localized tenderness and swelling at site of injection. Signs of a serious allergic reaction can include: difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness, and anaphylaxis or anaphylactic shock (1). Current medical treatment for vaccine reactions are aspirin or Tylenol, cold compress/tepid bath, Pedialyte, antihistamines, Epinephrine and Corticosteroids (1). It has been estimated that only one to ten percent of all possible vaccine reactions are reported to Vaccine Adverse Event Reporting System (VAERS) (2). According to VAERS guidelines, any and all adverse events following a vaccine are supposed to be reported. It does not matter if the physician feels event/symptom(s) is vaccine related or not, all events (i.e. fevers, fussiness, runny nose), should be reported. This practice is not

happening, so no one knows how safe or unsafe vaccines are. Reporting a possible adverse event following administration of a vaccine requires the lot number of the vaccine (1). Although this is required to be written in the patient's records, it is frequently missing. A study needs to be done on what percent of records actually contain these lot numbers. Another study needed is the percentage of doctors who know how to report, what to report, and have reported to VAERS.

CONCLUSION:

This technique has resulted in consistent reduction and/or resolution of a myriad of symptoms in all age groups. Most of the patients who have not responded to any other therapies respond well to this technique. This paper opens the possibilities of studying vaccines, or any injected substance (i.e. cortisone, or other medications) and their detriment to health when injected into a meridian. Is there a certain depth that is needed to affect the meridian? What substances are naturally cleared or do not affect the meridian? Investigation into better ways to detect/screen for these problems and ways to remove the injected substance from the meridian is needed. This technique opens up another path for clinicians and researchers to pursue when dealing with a patient's health problems.

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What Part Does Cervical Spine Manipulation and Chiropractic Care Play in Dissection of the Vertebral and Carotid Arteries and Stroke?

Paul Sprieser, D.C., DIBAK

ABSTRACT:
This has been a controversy that has been playing out for more then seventy seven years, in the newspaper, television, radio, and medical and chiropractic literature. There has been many sensational reports that many times have been exaggerated the frequency on which this condition occurs. My interest has been fostered, because of my working as an expert and consultant for the legal profession on this matter. I believe it is time to bring some sanity and reason to this question, of whether chiropractic cervical spinal manipulation, is a danger to the general public or the cause of vertebral and carotid artery dissections with the resulting stroke.

INTRODUCTION:
I first read about this subject of chiropractic cervical manipulation as possible cause of strokes that appeared in the New York Times and later in the New England Journal of Medicine.[1] This study reported the incidence of strokes caused by manual manipulation of the cervical spine done by chiropractors, osteopathic physicians, medical doctors and physical therapists. The study reported some 48 cases that spanned nearly 50 years time. At the time I read these reports I didn't think much about this as an important factor for my self and the chiropractic profession.

However, as time has gone by, this matter has become a prominent question affecting the practice of chiropractic and the number of patients' using chiropractic services. The danger of suffering a stroke from manipulation of the neck region was quoted at one case per 20,000 adjustments. This fabrication of facts had been perpetuated in the national newspaper The New York Times by the science writer Jane Brody, "When Simple Actions Ravage Arteries".[2] On June 26, 2002, on a national television program, Scientific America Frontiers Series, entitled "A Different Way to Heal"?, host Alan Alder, depicted chiropractic treatments in a very unfavorable way. He interviewed a disgruntled former chiropractor about the value and danger of cervical manipulation. This theme, that cervical spine manipulation can cause a stroke in 1 case per 20,000 cervical adjustments was perpetuated.[3]

The fact that spontaneous dissection of the vertebral (VAD), and carotid (CAD) arteries occur during many normal activities in the susceptible individuals, with sudden and abrupt neck movements such as looking over the shoulder to back up a car. Other activities that have brought about this condition have been having one's hair washed at the beauty salon, drinking a shot of liquor ("bottoms-up"), lifting a heavy object, practicing yoga, painting a ceiling, coughing, vomiting and sneezing, not to mention sports injuries or motor vehicle accidents (whiplash).[4,5] Some time the natural action seen in soccer of heading a ball could start this event.[6]

There does not seem to be a clear relationship between chiropractic cervical manipulation as a major causative factor for either VAD or CAD, even though it has been reported in the medical literature. The latest article appears in the Journal of Neurosurgery issue of September 16, 2011 states that "the epidemiololgy of these injuries is almost impossible to ascertain. Studies have suggested that their incidence range between 1 in 100,000 and 1 in 6,000,000 manipulations."[7] Far cry from 1 stroke per 20,000 adjustments that TV and newspaper articles suggested. This battle has been waged by organized medicine in it Journal of the American Medical Association (JAMA) in 1947 in an article, Cerebella and spinal injuries after chiropractic manipulation,[8] "Several maleficent results of cultist mechanotherapy have been reported," which reported three case histories of what was most likely craniocervical arterial dissection. This attack had been continued in 2003 in Connecticut, billboard ads, bus ads from an on line web site www.neck911.com, which was supposedly belonged to "Chiropractic Stroke Victims

Awareness Group".[9,10] So what are the facts about this serious and devastating problem?

DISCUSSION:

I believe a good beginning point on this topic is look at the statistics of the number of new case of strokes that occur in the United States each year. The number of cases seem to vary somewhat on the source that are searched for information the Center for Disease Control (CDC) showed the total of cases reported at 795,000, with 13,000 under the age of 19, and the death rate of 143,574.[11] What this paper is addressing is the strokes caused by the dissecting of the vertebral and carotid arteries and what part does manipulation of the cervical spine play in these occurrences.

A stroke also known as a cerebrovascular accident (CVA) is when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts. The VAD and CAD is a spontaneous dissection, which occurs when the inner layer of the artery know as the intima tears and the blood push in against the muscular middle layer and reduced the blood flow to the brain. The key word here is spontaneous occurring for no particular known reason which will vary in each case. The number of cases for each condition from both medical and chiropractic studies are the same. VAD occur 1 to 1.5 per 100,000 and CAD occur 2.6 to 2.9 per 100,000 people in the population, taking a midpoint in each category at 12 (VAD) and 28 (CAD) per million. This is multiplied by the current US population of some 312,000,000 making 3744 VAD and 8736 CAD totaling 12,480 case, most research estimate the occurrence at 12,000 to 15,000 cases per year.[12,13,14,15,16] In 1993 the number of strokes possible cause by cervical manipulation would only represent 0.7% based on the VAD and CAD percentages on total US population at that point of approximately 260 million and 10,400 cases. Another important fact is that the dissections that occur create strokes in about 20% of reported cases in the age bracket of 30 to 45 years of age. This represents in 1993 statistical information about .3% of the some 700,000 strokes that occurred nation wide that year.

On January 13, 2011 the Association of New Jersey Chiropractors (ANJC), had a risk management seminar presented by Louis Sportelli, DC, President of National Chiropractic Mutual Insurance Company (NCMIC), which is the largest chiropractic insurance covering currently 40,000 chiropractors. In a review of information from (NCMIC) lawsuits filled over a three year period 1991-92-93, on stroke trend which tend to be very costly, reported the following information. Over this three year period a total of 700 claims were filed and settled against the 24,000 insured chiropractic members, which represent 50% of the U.S. chiropractors at that time. Ninety six claims of CVA over this three period were filed 61 cases were closed with payment, and 35 were closed with no payment meaning the case had no merit. These represent approximately 20 strokes per year among it insured members which is 5% of all malpractice claimed filed, and would represent about 1 stroke per 2 million cervical manipulations. Other important statistical information is chiropractors preformed 80 percent of all spinal manipulation performed in the US. The average of approximately 120 patient visits per weeks, this would mean that 24,000 (NCMIC) insured chiropractors in 1993, working 50 weeks a year would perform 144,000,000 adjustments, and the estimate that the cervical spine was adjusted 30% of the visits performed 43,000,000 cervical manipulations per year. This reported information covered only NCMIC insured members that would mean that another 24,000 other chiropractors were not included in this information.[17]

If I were to extrapolate the NCMIC information about the practice of the chiropractors to those not insured by this company, it should be fair say we could just double all the findings. This would simply mean the total number of adjustment delivered in the US would be 288,000,000 per year and 86,000,000 cervical manipulations per year were preformed. However I believe that this idea of only 30% of spinal manipulation on any given visit of the NCMIC insured chiropractors is a very low one. The cervical spine will be examined and adjusted for many reasons other then just neck pain, and headaches. The physiological and neurological facts that all nerve information traveling from the brain outward to the organs and muscles and joint and also traveling back to the brain by this route will be influence to structural distortion to this region. So my belief is the true number cervical manipulations to the total number of patients treated is more like 75% of cases treated, making total number of

cervical manipulation more the realm of over 200,000,000 cervical adjustments per year.[18,19]

I make this statement because people come to chiropractors for conditions other then neck, low back pain and headaches. Some of the conditions that I have been treating and I believe most other chiropractors are digestive complaints such as heart burn and GERD, Ileocecal Valve Syndrome as well as Hiatal Hernia, which are influenced by the region of the upper cervical spine's Phrenic and Vagus nerves.[20] The influence of the upper cervical C1-C2-C3, segments influence the Temporomandibular Joint Dysfunction on the muscles of mastication, which are neurological active when the neck is rotated.[21,22] The upper cervical spine when fixations are present influences the lumbar region by causing bilateral weakness of the gluteus maximus.[23] The lower cervical spine disc have been tied to difficult low back and leg pain (sciatica), this was the title of a book by a prominent Californian Neurologist.[24]

The physiological factors that most likely lead to these arteries dissections can be genetic in nature such as Ehlers-Danols and Marfan Syndromes, which affect the connective tissue that make up the walls of these arteries. Some connective tissue abnormalities show irregular collagen fibrils and fragmentation of elastic fibers and have been found to be present in VAD 68% and CAD 55% of the skin biopsies.[25,26]

Other factors that have shown a relationship to these arteries spontaneous dissection are recent infection, history of migraine and the use oral contraceptives. Cardiovascular risk factors that play a part are atherosclerotic vessel changes, hypercholesterolemia, diabetes and hypertension. This also accompanied by raised "C"-Reactive Protein a general indicatory of inflammation in the body and elevated levels of homocystein (>12µmol/L),[26,27,28,29,30,31] which has been shown to make the artery wall subject mechanical stress, such as cervical adjustments. The area of structural stress shown in Figure #18 below can play a part is at the atlas where the vertebral artery leaves the foramen of the atlas known as (V3). The carotid artery is vulnerable at the skull base were it enter the carotid canal.

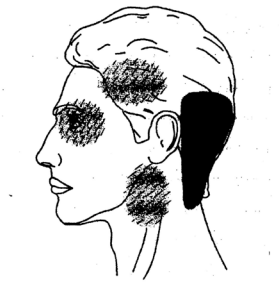


Fig 3. Regions of the head and neck where pain is commonly found in CAD patients.

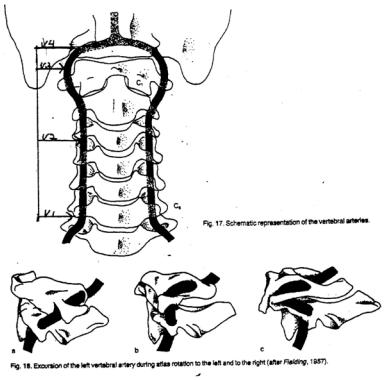
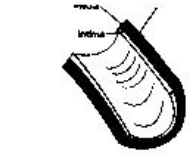


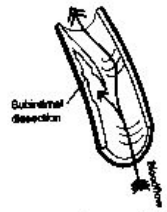
Fig. 17. Schematic representation of the vertebral arteries.

Fig. 18. Excursion of the left vertebral artery during atlas rotation to the left and to the right (after Fielding, 1987).

The above illustrations with the permission of: Fig. 18 (right), Thieme-Stratton Inc. Manual Medicine-Diagnostics, Fig. 3 (left), Journal of Chiropractic Medicine, Elsevier Publishers, "The Etiology of Cervical Artery Dissection"

I believe that these hereditary and physiological factors are what set the stage for the vertebral and carotid artery dissections and when cervical spine manipulation is applied in a position of hyperextension combined with rotation, is what is known as adding insult to injury leading to greater damage. Other overlooked structural patterns that have not been discussed in previous chiropractic or medical research papers as contributory to dissection are the loss of then normal anterior cure leading a military neck, anterior displacement of the head in AK known as (Pitch) or head forward.[32] Fixations of the upper cervical spine lead to greater mechanical stress on these vertebras and vertebral arteries.[33] Structural changes cause restriction of blood flow and narrowing or stenosis of the lumen and even clot formation at the site of injury and can lead to stroke. About 12,000 or so cases of CAD and VAD that occur in the US on a yearly basis about 20% will lead to ischemic stroke this occurs in individual 30 to 45 years old and younger but only 2% in the older individuals.[34]





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The astute observations by two physicians, Drs. Nagler & Pugliese, from the Cornell Medical Center was mentioned in New York Times, 12/18/88, article "A Pain In The Neck"[35], mentioning that manipulation of the neck had been associated with transient neurological symptoms and even stroke. The article mentions that hyperextension of the neck, with certain activities, such as changing a light bulb, could change blood flow from delicate area at the base of the skull where it meets the spine, can effect the elderly, because of foramina narrowing or atherosclerotic changes causing them to fall. This was followed up by Michael I. Weintraub, MD, chief of neurology at the New York Medical College in Valhalla, NY, article "Beauty Parlor Stroke Syndrome", JAMA, the observation of iatrogenic arterial injury and symptoms of stroke occurring in two elderly women after shampoo treatment in a beauty parlor.[36]

Dr. Weintraub undertook a study of the blood flow patterns of older man and women, when the neck was twisted or arched in an extreme position. This study contained at total of 70 patients 40, who manifested symptoms dizziness, vertigo, loss of balance, double vision, or numbness on one side of their body. Thirty control patients that did not develop these symptoms when their neck was in hyperextension. The test consisted of the use of magnetic resonance angiography (MRA), which allowed the track of the flow of blood through the vertebral arteries as the position of the neck was changed. This test method was safer for the participants because no dye was needed to visualize the flow.

The outcome of this study showed those patients with symptoms, when their neck was turned so that the chin was moved down towards the shoulder, showed a marked decline in blood flow and symptoms of dizziness occurred in 70% of this group and in the control group 13% manifested dizziness. This had significances for anesthesiologist when inserting a breathing tube to take the patient's head and neck out of the extreme position as soon as possible.

This point would hold true for chiropractors when adjusting the cervical region in older patient to avoid excessive flexion-extension or rotation when making correction in the neck region.

Other articles appearing in The New York Times that are perpetuating misleading and false information about strokes being cause by cervical manipulation have been written by the science writers Jane Brody in her personal health column, "When Simple Actions Ravage Arteries"[37], "With Strokes, Knowledge Is a Lifesaver"[38], and Anahad O'Connor, "The Claim: Manipulation Your Neck Could Lead to a Stroke".[39]

In the current year of 2011 according to Dynamic Chiropractic a bi-weekly publication that mails to every chiropractor in the United States some 56,000 to 58,000 are sent out. How many of these are full time practitioners is not known, so I believe it is reasonable to take 54,000.[40] If the information from NCMIC is brought up to date from 1993 to the present 2011, then we have the average chiropractor treating 120 patient visits a week multiplied by 50 weeks giving 6,000 patient treatments a year.[41] If this information is extrapolated to the total number of

chiropractors in practice we get 324,000,000 visits a year and this should mean that 54 stokes nation wide might come from chiropractic cervical manipulation. Carrying this one step further this should mean 1 stoke per each 1,000 chiropractors in practice.

Going back to the current excepted occurrences of VAD at 1 to 1.5 cases per 100,000 and CAD at 2.6 to 2.9 cases per 100,000 the total number of spontaneous dissections of these two vessels should amount to 12,482 cases in the US with the current population being at 312,455,000. Take both the studies done in Canada and The RAND Reports of 1991 and 1998, the use of chiropractic services at some where between a low of 6% and a high of 12%, I should think 8% would be an acceptable use level, or some 25,000,000 individuals receiving chiropractic services. If we take the total number of these two arterial dissection and use the fact of only 8% use of chiropractic services in the US, this would mean chiropractor would likely see only 1000 individuals with this problem divided over 54,000, which is 54 cases a year might be expected occur in the US.[42,43]

Another factor not covered is that cervical manipulative therapy (CMT) is that these procedure are not only done with the patient supine, but can be done with the patient prone and also seated.[44,45] These studies only mention just two types of adjustments done by chiropractors first mentioned is low velocity, high amplitude manipulation consists of a series of gentle repetitive motions to the cervical region, second is described as high velocity, low amplitude, using a sudden thrust to the cervical region.

These two descriptions do not take into account instrument adjustments done with electrical impact, manual activator instrument, or for specific upper cervical adjustments such as taught at Palmer College with the manual toggle recoil or the Pettibone instrument.

ADDENDUM:
With this controversy, which has been going on for the past 77 years, a clear picture should have come from all the studies that have been published. However, that does not seem to be the case, with the publication of the most recent study of craniocervical arterial dissections and chiropractic published in the Journal Neurosurgery 9/16/11, the battle for the truth goes on. The very first that I came across was referenced by Donald R. Murphy, DC's article in the Journal of Chiropractic and Osteopahty,[46] and appeared in JAMA, July, 1934, 103 (3):1260.[47]

I want this paper to represent the middle ground looking at what the medical, osteopathic, chiropractic, physical therapy publications had published on this matter. Many short falls have been pointed out by Anthony Rosner, Ph.D., in his response to the most current article cervical article dissections. These being list 1.) What was the total number of patients in this study that the 13 cases represent 2.) Lack of details in medical history of presented, 3.) Provocative testing significance inaccuracy reported, 4.) Complications in the aurthors' own interventions and finally 5.) Ambiguity of identification of previous healthcare providers.[48]

Additional factors that I believe will make this information more relevant, is over what period of time (years) did these 13 cases take place, since this is an infrequent occurrence? When a patient is in this type of crisis it would be obvious they would be taken to a nearby ER of the closest hospital, but I am also aware that not all hospital will have a neurosurgical department. I was curious so I check the Phoenix, Arizona to see how many hospital facilities were in that city and the records show 42 in total. So my question how did this particular facility get so many cases? The total population of Phoenix is 1,512,986, and the entire state population is 6,392,017. This query comes from the review of the three year study in Germany published in the Journal of Neurology in June 2005.[49]

This last study was much better balanced about this matter, since all university affiliated neurological department within Germany were contacted by mail and asked whether there had been admission in the past three years for VAD related to chiropractic therapy of the cervical spine. This resulted in 21 of the 32 neurological centers replying. Eleven centers reported no case and 13 centers reported a total of 40 cases. Out of this sampling 4 case

from one medical school occur prior to the observation period. What makes this particular study very useful are a number of factors first being Germany's socialized system of health care similar to Canada. The second being the wide use of spinal manipulative therapy (SMT), by MD especially Orthopedic surgeons, Neurologist, General Practitioners, also included in this study were Physiotherapists, Chiropractors. Making the exposure to what was being termed (chiropractic therapy), which is being performed by all the previous mentioned groups. This SMT was being used for neck muscle tension-75%, tension headaches-20%, migraine-3%, vertigo-3% and also low back pain-6% of these cases. It also demonstrated the safety of SMT with only 36 VAD cases being reported due to SMT. Assuming that the population of Germany was at least 81,000,000 at the time of this study and a rate of 12 case per million pre year could expected out of a total of 972 case a year with a total occurrence for the three years would be 2,916 case, or 1.250%.

In Germany the total number of Medical Doctors was 188,332 and the number of VAD cause by cervical manipulation done by Orthopedic surgeons was 18 or 50% of the case Physiotherapist was 5 or 14% and Chiropractors 4 or 11%, General Practitioners was 2 or 6%, Neurologist was 1 or 3%, Homeopaths was 1 or 3%, Unknown was 3 or 9%. The medical profession represent 60 % involvement of (VAD) that the associated with cervical spine manipulation (CSM) and chiropractor only represent 11% of the case. However MD total was 188,332 in Germany and DC according to what I was able to find were only 68, because SMT is part of regular medical training. So the 4 VAD case attributed to chiropractors might be of greater significance, because of the smaller number of practicing in Germany.[50] This study also points out how difficult it is to diagnosis VAD when 60% of cases in this study were associated with M.D. doing the cervical adjustments. It also shows how difficult to diagnose VAD from other conditions that are less serious.

Another review of long term treatment of neck pain and muscle-tension headaches with manipulation of the cervical spine (MCS) appeared in Physical Therapy Journal in 1999.[51] The reviewer looked at 116 articles that reported 177 published cases of arterial dissection or spasm causing ischemic injury to the brain stem, with death reported in 32 cases or 18%. These cases were published between 1925 and 1977 a 72 year period of time and only 2% of cases involved a form of (MCS) done by physical therapists. It showed that a mobilization of the cervical spine with (nonthrust passive movements) would avoid a patient's exposure to vertebral artery damage. This is the same approach DC are doing using Activator adjustment instruments and in Applied Kinesiology (AK), with a respiratory assist to (MCS). These studies showed that the benefits were not outweighed by the risks.

One of the most important factors in all these studies is the time element between (MCS) and the onset of symptoms. It is easy to draw the conclusion the (MCS) cause the dissection in of the vertebral or carotid arteries if the symptoms occur while the patient is on the treatment table or within a few hours after the treatment. But how long should we consider a connection between cervical manipulation an the on set of symptoms, 24 hours, 48 hours, a week or month later? What seem to be lacking in all the studies and cases presented that don't have an immediate or a few hours after treatment onset, is many other variables that have not been asked of the patient assuming that a death did not ensue. It is quite possible in a 24 hour or greater time span the patient might have gone to the beauty parlor and had their hair washed, had a prolong dental procedure, had a message, participated in some sport activity, practice yoga, or painted the ceiling of their home. However these questions don't seem to be asked at the ER or the admitting hospital. This is what had started the current flurry of research papers since 2003 the Bridgeport Connecticut city bus campaign, ("Injured by a chiropractic adjustment?") and the Chiropractic Stroke Victims Awareness Group, was speculated that a long-time foe of chiropractic might have started. If the patient was asked had they gone to the family doctor or an orthopedist or had a message therapist treat the neck pain or headache prior to trying chiropractic. I believe we would find the same connection to these services as causative factors for the stroke that chiropractic cervical manipulation has been accused of.

Finally most studies of vertebral and carotid artery dissection that have been published in various medical research journals show relatively small number of case with serious outcomes. It would seem that spontaneous

rather than traumatic events precipitate cervical artery dissections. Spinal manipulation as a direct cause factor for these event was shown to be unlikely in an experiment at the University of Calgary, using a peak elongation of the vertebral artery during neck manipulation are at most 11% of the elongation that would be seen at the arterial failure limits: these are shown to be consistently lower then those seen during provocative test of the cervical spine.[52]

CONCLUSION:

To believe that chiropractic spinal manipulation of the cervical region is without any danger is to be naïve. To think that (MCS) should be avoided at all cost, that the benefits are out weighted by the danger is even more naïve based on the evidence presented. The reasons for manipulations of the cervical spine is not just for neck pain and headaches as the medical studies seem to intimate. The cervical spine is the gateway to the rest of the body and the nerves that traverse or originate in this region supply organs such as the thyroid and parathyroid glands, the control the muscle of the arm and shoulder and chest wall. The upper cervical segments C1-2-3 has connections to the muscles of mastication and swallowing and contributes the normal function of the temporomandibular joint[53] along with beneficial effect on elevated blood pressure.[54] It affects the lungs and controls the diaphragm by way of the Vagus and Phrenic nerves.[55] The lower cervical at C5-6-7 disc are commonly displaced anterior creating what in AK is known as Hidden Cervical Disc Syndrome (HCDS) that causes low back and sciatic leg pains.[56] These are only some of the positive benefits measured against what small risk to VAD or CAD found in manipulation of the cervical spine.

This quote is taken from an article published in the Royal Society of Medicine Press, "It seems unfair to access the risk of spinal manipulation as practiced by well-trained chiropractors alongside that associated with untrained therapists." (Or Medical Doctors who use this system only occasionally). "Chiropractors may argue that it takes years of experience to learn the fine psychomotor control required for skilled manipulations. Certain skill and experience are important, and it is relevant to differentiate between different professions. On the other hand, skill is a quality not easily controlled for in such research; even some chiropractors may be more skilled than others. Moreover, this review is aimed evaluating the risk of an intervention (spinal manipulation) and not that of a profession. In fact, this review shows that the implicated practitioners are not only chiropractors but also surgeons, shiatsu practitioner, 'bonesetter' and general practitioners." [57,58]

In this previous paragraph the statement about the skill levels of individual chiropractor is a very pertinent factor, not only in the practice of chiropractic, but in the medical field of surgery. This is what makes the difference between being average or being great, the ability of the individual practitioner's manual dexterity and the neural feed back system to control the implementation and the outcome of their treatment. It has been shown in chiropractic research studies that skill level does not reach it full potential for at least 3 years in practice.[59]

Two of factors in cervical adjustments are the neck position of hyperextension with rotation used during the correction of subluxation the other is the amount of force that is used. The two methods mentioned was low velocity with high amplitude slightly more gentle and the other is high velocity with low amplitude this is a single motion. The research study show less strain on the vertebral artery in the high velocity with low amplitude, then in what is perceived a more gentle low velocity with high amplitude.[59] However, the most important issue in this controversy is the fact that VAD and CAD occur spontaneously during the course of normal living activities. The symptoms these conditions may produce will likely bring them into a chiropractic office. The likelihood that you may see a patient with one of these conditions statistically is about one case per 1000, practicing chiropractors.

While it is possible that a cervical spine manipulation, by a chiropractor being done with to much force or with too much hyperextension and rotation could hasten the onset of a dissection and even lead to a stroke. The chances are this would have occurred anyhow through course of daily living activities. Last thing that a chiropractor should do if there is a possibility that a VAD or CAD may be occurring is to adjust the cervical spine, because the

odds are not in our favor for a favorable outcome. The facts are that this will only make matters worse and can lead to stroke with permanent disability or even death in very rare cases, and of course malpractice suit.

To avoid having this situation catch us off guard, when treating patients in this age range (30-45), with symptoms that are possibly cause by a dissection of these two arteries. I have developed a questionnaire that should lessen the change of missing the diagnosis of VAD or CAD.

CAD and VAD Questionnaire

Occurrences	Today	Past Week	Past Month	Past 6 Months
Symptoms				
Dizziness or vertigo				
Nausea				
Numbness				
Double vision				
Balance problems				
Pain in back of neck				
Headache at skull base				
Pain in head region				
Changes in taste				
Ringing in ears				
Difficulty in speaking or swallowing				

Health Issues	Yes	No	For How Long
High Blood Pressure			
Migraine Headaches			
Oral Contraceptives			
Cortisone use			
Diabetes			
Recent Surgery			
Blood Test			
High Homocystein			
High Cholesterol			
High C-Reactive Protein (CPR)			
Recent Infections			
Lung or Lyme disease.			
Marfan syndrome			
Ehlers-Danols synd.			

Action & Habits	Today	Past Week	Past Month
Bouts of sneezing, coughing, vomiting, Yawning			
Nose bleed			
Long dental procedure			
Painting ceilings			
Recent child birth			
Message, deep tissue, Rolfing, etc.			
Beauty parlor hair washing			
Previous Chiropractic, Osteopathic or Physical therapy to neck region.			
Car accident, fall or other injuries where the neck was involved			

Activities	Today	Past Week	Past Month	Past 6 Months
Football				
Basket Ball				
Soccer				
Ice Hockey				
Rugby				
La-Crosse				
Wrestling				
Boxing				
Martial Arts such as Judo				
Weight lifting				
Yoga				
Swimming				

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Gluten-grain Sensitivity Patterns and Manual Muscle Testing

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ABSTRACT:
The authors discuss a diagnostic approach utilizing manual muscle testing (MMT) of patients suspected of suffering with grain sensitivities. This approach has helped increase the sensitivity of muscle testing results. Specific PAK diagnostic and treatment protocols are recommended.

Key Indexing Terms: Professional Applied Kinesiology, Gluten, Gliaden, Glutenin, Auto-Immune Disease, Celiac, Intestinal Disease, Failure to Thrive, Manual Muscle Testing, Multiple Sclerosis

INTRODUCTION:
Over thirty plus years of combined practice, the authors have placed great clinical importance on identifying mental, chemical, and physical triggers for problems with which our patients present. On the biochemical level **gluten-grain sensitivity** reactions have been observed in many patients presenting with often a mysterious constellation of conditions and symptoms. Another observation is that neuro-muscular sensitivity testing (using MMT) for these grain related triggers has been inconsistent. Unfortunately, lab testing can be just as inadequate. False negatives have been observed in patients who responded well to elimination of dietary sources of gluten grains. (11, 12)

DISCUSSION:
In our society it is recommended by the USDA to consume "…a majority of our calories from cereal grains… (even though)…it is precisely these grains that can incite life-threatening celiac disease and chronic gluten sensitivity". (1) In fact over fifty chronic health conditions have been solidly associated with food triggers in the medical literature.

The following are some established facts regarding food sensitivity reactions (1):

- Can effect any organ or tissue including immune, endocrine, and nervous systems
- Can be a driving factor in many diseases or symptoms from mild indigestion to severe arthritis to auto-immune disease
- Stimulate **inflammatory** mediators such as histamine, leukotrienes, cytokines, lymphokines, and interferons
- Avoidance often creates miraculous changes in patient's symptoms
- Often **undiagnosed** because most are delayed antibody reactions

For example, celiac disease is an under-diagnosed malabsorption syndrome precipitated by consumption of ***gluten*** containing foods and possibly adenovirus which involves:

- Multi-factorial etiology
- Loss of normal villi in small intestine
- Missing enzyme (pancreas deficiency)
- Intestinal permeability
- Immune reaction (is most accepted causal hypotheses)
- Often bulky, pale, frothy, foul-smelling, and greasy stools
- Possible symptoms of diarrhea, abdominal pain, flatulence, weight loss, anemia, muscle cramps and spasms (2)

"The seeds of most flowering plants have endosperms with stored protein to nourish embryonic plants during germination." (3) To clarify, ***gluten*** is a term that describes the mixture of proteins in the endosperm of ***wheat, rye, barley, spelt, kamut,*** and ***triticale*** seeds or grains. (1) Gluten is composed mainly of the large, high molecular weight proteins gliadin and glutenin. (4, 9) Together with starch they make up the endosperm of various grass-related grains. Gliaden and glutenin make up approximately 80% of the wheat endosperm proteins and are very difficult to digest. (3) When ingested or inhaled they create toxic immune reactions in genetically sensitive individuals. (5, 9) For example, gliadin and it's cousins ***secalin*** from rye, and ***hordein*** from barley, are considered to be the triggers for celiac and dermatitis herpetiformis. (2, 9)

Larger proteins typically have a quaternary molecular structure that is unwound by adequate stomach acid levels. Pepsin and pancreatic proteases (trypsin and chymotrypsin) can then pick apart the polypeptides and amino-acid linkages. Hypochlorhydria and/or pancreatic enzyme deficiency are common and result in the under-digested gluten proteins becoming even more reactive.

Oats do not contain gliaden but do contain glutenin, and are usually stored and processed in facilities that also process the other gluten grains. Rice can cause cross reactivity with glutenin antibodies in some people. (1) Oats, rice, and spelt are common alternatives and appear to be tolerated to an extent in some individuals, especially if other stronger gluten sources are avoided. Spelt (triticum spelta) is a gluten grain and an ancient type of wheat originally grown in Iran around 5000 to 6000 B.C. Older wheat grains such as spelt and einkorn may contain lower molecular weight endosperm proteins and less overall gluten. Newer commercial wheat grains have been hybridized to contain much higher levels of gluten. (8, 13)

Currently we recommend the tissue trans-glutaminase test (**tTG**), the **CeliacSure** home test (GlutenPro), and also the anti-gliaden antibody test (**AGA**) (1). Glutenin IgG and IgA blood antibody tests are now available (Cyrex). Note: these antibody tests may give false negatives if the patient has already been avoiding gluten foods.

It is also critical to understand that **the disease causing components of grains are only partially accounted for by the gluten problem**. (1, 12, 13, 14, 15, 16, 17) For example, wheat germ agglutinin lectins, and glycemic reaction are also major metabolic and neuro-immune disruptors. (13, 14, 16, 17) Interestingly, "…US EPA Title 40 Section 503 allows for wheat to be grown on sewage sludge. Some uptake of heavy metals is possible." (15) In fact there is also a species specific reaction to gliaden in all humans that is regardless of immune sensitivity: **gliaden upregulates zonulin proteins in small intestine thereby increasing intestinal permeability and creating many negative ramifications for human health.** (16, 17)

Another difficult aspect of gluten sensitivity for patients is the addictive nature of gluten exorphins and gliadorphins. These opioids have cocaine-heroine-morphine-like effects that produce strong cravings for the offending foods. Withdrawal symptoms can occur upon commencing a gluten-free diet. (1, 12, 13, 14, 16, 17)

Braly and others discuss a theory for gluten sensitivity which considers that humans have been harvesting gluten grains as a food for approximately 10-15,000 years. Our hunter gatherer ancestors likely consumed no gluten grains for millions of years. However, after the rapid extinction of many large mammals in Europe, North America, and Asia, humans began to cultivate grains for the first time in our history. (14) Therefore, the last 15,000-20,000 years, at most, has been an insufficient time period for humans to adapt to grains as a food or for sensitive individuals to fade from the collective human gene pool. (1, 13, 14) This is likely a factor in the growing prevalence of gluten grain sensitivity. (13, 14) Mercola states: "…A study using frozen blood samples taken from Air Force recruits 50 years ago has found that intolerance of wheat gluten, a debilitating digestive condition, is four times more common today than it was in the 1950's…"

In *The Awful Truth About Eating Grains, Dr. Del Thiessen writes:*

"Lectins, which are proteins that are widespread in the plant kingdom, are recognized as major anti-nutrients of food. Cereal grain lectins are wheat germ agglutinin (WGA). It can interfere with digestive/absorptive activities and can shift the balance in bacterial flora shown to cause problems with normal gut metabolism. The potential to disrupt human health is high." (14) WGA lectins have many other negative health effects, especially since they readily cross the blood brain barrier and attach to the neuronal myelin sheath. (14, 16, 17)

In "Your Family Tree Connection" by Reading, and "Dangerous Grains" by Braly and Hoggan, a number of common **indicators for gluten grain sensitivity** that can be observed in the patient's familial history are presented:

- Alcoholism
- Mental illness – depression, anxiety, bipolar, suicide
- Diabetes
- Intestinal problems (can be severe – Crohn's Disease, IBS)
- Obesity
- Gout
- Skin problems - excema, dermatitis, psoriasis
- Pellagra (B3 deficiency: diarrhea, dermatitis, and dementia)
- Native American heritage
- Cancer
- Auto-immune disease, especially lupus, RA, MS
- Osteoarthritis
- Osteoporosis
- Celiac
- Autism
- Failure to thrive (1, 5)

PROCEDURE:

As part of the authors' clinical MMT routine we have incorporated **enhanced chemical and therapy localization challenge** procedures, usually simultaneously, to enable the nervous system to reveal sensitivity to gluten grains in certain depleted and imbalanced patients. Especially in patients with poor overall nervous system function such as seen in MS, the motor abnormalities can render MMT very difficult to interpret. In some cases, however, the **motor dysfunction can be at least temporarily improved by insalivating appropriate neurotransmitter (NT) supporting nutritional substances.** With a more normal motor function it becomes dramatically easier to interpret MMT response to food challenges. This can be very helpful in the management of these individuals, especially when other methods have failed to convince the patient to avoid these toxic irritants over the long term.

Neuromuscular sensitivity testing with enhanced methods:

1) Normal specific and/or group muscles should be utilized as MMT indicators
2) Food protein sources are preferably placed over the small intestine under a flat bar diagnostic magnet (10, 11) Previously normal muscles, such as quadriceps, are then tested for weakening both eyes open and closed. If muscle function remains normal then TL to various acupuncture meridian Alarm points is added and the muscle indicators retested. Food challenges can also be insalivated for testing. However, this can result in formation of antibody-immune complexes which stimulate secretion of inflammatory mediators.
3) If muscle inhibition is not observed with above then **NT precursor/cofactor substances** (see list) are insalivated and the procedure repeated

4) MMT inhibition induced by gluten sources during any part of these procedures should be followed by appropriate high quality lab testing and elimination diet trials for maximum validation of the reaction
5) Elimination trials should entail at least a 4 week complete avoidance of the foods for adequate symptom improvement to be noted. Then dietary re-introduction of the food with close observation of symptoms can be done if the patient is so motivated. Printed education of sources of gluten proteins and peptides and withdrawal symptoms is provided to assist the patient in this process.
6) If blood antibody testing is negative for gluten and gliadin sources but MMT results are positive, the patient is strongly encouraged to complete the elimination trial and be reassessed afterward
7) Small intestine alarm point TL and/or quadriceps inhibition is tested for strengthening to **HCl, B1, Zinc, pancreatic enzymes, Spleen Chi herbal tonics, sea salt** (source of chloride for HCl), **dysbiosis remedies, probiotics, bile salts** and other **liver support**, and especially intestinal permeability nutrients such as **L-lutamine**

NT supporting substances/activities:
B3, B6, tryptophan, tyrosinase, tyrosine, adrenal substance, Citric acid cycle nutrients, rhodiola, choline, pantothenic acid, pantethine, yohimbe, physical exercise, DHA, amino-acid blends, phenylalanine, oxygen, calcium

An important factor is to explain to the patient that they must allow the affected organs and tissues a long period of healing (often 1-2 years) and nutritional support in order to realize maximum health, especially after lifelong exposure to these toxic food irritants.

CONCLUSION:
Food allergies are extremely common contributors to morbidity and a significant factor in mortality among industrialized nations (6). At least 1 in 4 children have adverse reactions to foods and food additives, many of which are sources of gluten proteins and peptides (7). The authors have observed this problem in countless patients as well as ourselves and our children, many of whom had been treated with **limited or no success** in other ways. Obviously, there is incomplete knowledge and lab testing of the effects of gluten exposure, other gluten-grain protein reactions, and non-allergic toxicity effects of gluten grains. Thus, effective MMT investigative procedures are helpful to galvanize the patient and the doctor to make the long term commitment to avoidance of gluten-grain foods. With enough diagnostic tools this problem can be eliminated and patients' health restored or improved.

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Division III

Constructive Review

Further Elaboration on Dr. Brian Llewellyn's Meridian Tension Technique

Jac Daccardi, D.C., F.I.A.M.A., F.A.S.A., D.A.A.I.M.

ABSTRACT:
It has been found that the "Meridian Tension Technique" developed by Dr. Brian Llewellyn is an extremely useful treatment tool which deserves further comment, investigation, and development. It is based on the premise that the acupuncture system is electrical in nature and is conducted through or transmitted across the fascia which can become damaged under certain circumstances, such as in trauma. Herein discussed are further thoughts on the mechanism of action, a revised approach which allows the technique to be employed in a manner which decreases assessment and treatment times and appears to work equally as well as the original approach.

Key Indexing Terms: Acupuncture, Meridian Therapy, Meridian Tension Technique, Brian Llewellyn, Shen Men

INTRODUCTION:
In the form originally presented, the Meridian Tension Technique involved stretching the fascia and associated superficial tissues (skin) that underlie or are approximate to an acupuncture meridian. Stretching the fascia and skin both axially in the plane of the meridian and transversely to it caused a normotonic strong indicator muscle (SIM) to become weak when applied either to areas of injury, or interestingly enough, areas distal to the injury. The latter result is perhaps the result of transfer of tension along the entire fascial plane, with most damaging effects in areas of structural weakness. It is worthwhile to review Llewellyn's paper, "Meridian Tension Technique and the Mechanization of Acupuncture".[1]

DISCUSSION:
Having implemented Dr. Llewellyn's meridian tension protocols on a daily basis, it has been found to be useful and necessary in nearly every patient. Over time and with experience, further conclusions on the possible mechanisms of action developed. One is that it appears that there is an influence of the piezoelectric effect operating within the fascia and skin. Another is that within these same tissues are mechanoreceptors, which when damaged or otherwise inappropriately stimulated can drive either a nociceptive or a maladaptive mechanoreceptive barrage through the sensorimotor loop. Combined, these factors may give an appearance of one phenomenon when in fact multiple linked phenomena are occurring together.

The Proposal of Multiple Linked Phenomena
In this model, distortion of local tissues through which the acupuncture channel may run could cause an incoherence of meridian flow. Possibly, this incoherence alters the electrical expression through the locally traumatized tissues, and "leaks" current into those areas. It could be pictured similar to a hole in a garden hose which allows water to seep out to the surrounding area. As these tissues build up a charge similar to an electrical capacitor, there may be random discharges resulting from movement of tissue. As a concurrent phenomenon, this discharge may alter cell membrane potentials or conformation of proteins in the extracellular matrix and subsequently alter firing patterns of neurons involved with mechanoreception/nociception.

Additionally, traumatic alteration of the tissues themselves may create a piezoelectric charge which interferes with meridian flow particularly if it has become incoherent as described above. This reciprocity with the changes in tissue from the "leakage" noted above could create a mutually propagating cycle of dysfunction. Finally, simultaneous to all of the previously suggested mechanisms, there may be damaged mechanoreceptors in the traumatized tissue which feed incoherent information to the sensorimotor loop. Clearly, there is a lot to consider in this matter.

Increased Efficiency, Decreased Time

Because of the intensity of the labor involved with the original protocols, a shortcut has been developed which allows ostensibly the same results as the original technique, requiring much less time. This technique also appears to clear the tissue distortion in the fascia and skin surrounding the meridian. Contextualized slightly differently, this can be thought of as Injury Recall Technique to the acupuncture meridian.

Shen Men Acupuncture Point

Anyone familiar with this author's other published work on the use of the Shen Men (Fig. 1) acupuncture point can begin to appreciate the multitude of applications to which it may be applied.[2] Because of its intimate and powerfully influential relationship to both acupuncture and nervous systems, it has rendered itself an indispensable tool, the "Swiss army knife" of the clinical toolbox. In the technique to be described below, it has proven itself once again to be a valuable asset.

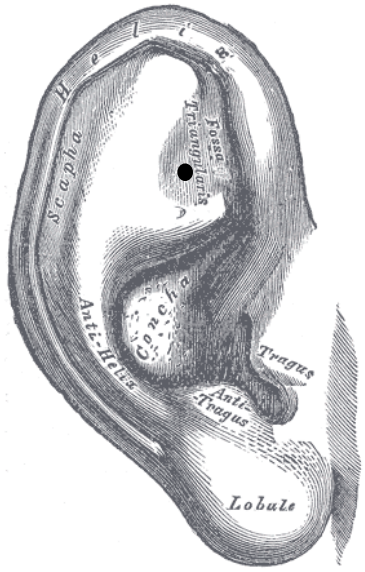

Fig. 1, Shen Men. Acupuncture point is found in the fossa triangularis, indicated by a black dot.

PROCEDURE:

Evaluation:

1. Manually muscle test a normotonic Strong Indicator Muscle (SIM), if strong:

2. Briefly stimulate beginning and ending points of a given meridian. (It is useful to have patient stimulate facial and upper body points, while clinician stimulates the more distal points simultaneously.)

3. Clinician or patient then immediately therapy localizes the Shen Men point, while testing a SIM

4. If SIM inhibits, that is indication of the need to treat that meridian. Continue checking in the same way for all meridians.

Treatment:

1. For each meridian that inhibits the SIM as indicated above, stimulate beginning and ending points on meridian simultaneously and immediately stimulate Shen Men with laser, tei shin or with fingers for approximately 5-10 seconds.

2. Retest as above, treating each meridian that shows necessity of treatment.

CONCLUSION:

It is recommended that the results of this new treatment initially be cross checked with Dr. Llewellyn's protocol. Thus far in practice this approach has been found to be just as effective as the original with less work required on the part of the clinician. This can be a considerable time savings when attempting to specifically locate a focal lesion somewhere along an acupuncture meridian, and particularly when multiple meridians are involved.

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ILLUSTRATIONS:

Figure 1. Shen Men. Gray H. Anatomy, Descriptive and Applied. 20th ed. Philadelphia: Lea & Febiger; 1910. New York: Bartelby. com; 2000

Connection of Bladder Meridian Points B6 and B50 to Reoccurring Switching and Yaw #2: A Special Energy Channel Associated With the Sympathetic Ganglionic Chains of the Nervous System

Paul Sprieser, D.C., DIBAK

ABSTRACT:
This paper will review the effect of simultaneous contact of either B6 or B50 meridian points after the correction of the modular pattern of Yaw #2 has been made when associated with switching. These two Bladder meridian points will trigger a rebound phenomenon that immediately reproduces the Yaw #2 modular distortion which recreates dural torque, neurological disorganization, cranial faults and TMJ dysfunction if they have been corrected.

These two Bladder meridian points seem to have a direct link to one another by way of an inner channel that runs parallel to the spine and connects them directly to the sympathetic ganglionic chain though out the cervical, thoracic, lumbar, and coccygeal regions.

While it is conceivable that the Bladder 6 point will not be simultaneously contacted after a Yaw #2 is corrected, unless the patient should place there hand on the head or put their glasses on their head. The Bladder 50 meridian point is located center of the posterior upper thigh where the hamstring and gluteus maximus overlap. These points will be immediately contacted in the sitting position, which reproduces the Yaw #2 pattern, this undoing your therapeutic correction in the cranial faults and TMJ dysfunction.

INTRODUCTION:
These observations stem from Dr. Goodheart's interest in posture, in 1966 he wrote and published a paper in Chiropractic Economics, "Posture its Effects on Structure---Function and Symptoms".[1] This came from the influence of Fredrick M. Alexander on B.J. Palmer that led to the specific upper cervical technique and the importance of the reflex complex of the upper cervical spine where the head meets the spine. In the 1979 Workshop Manual, Goodheart introduced the Oculobasic Technic;[2] This concept came from his reading of a book "Awareness Through Movement", Moshe Feldenkrais who incorporated these ideas of the Alexander Technique methods into his work. He said that "the eyes are not only for seeing".[3]

The eyes play a role in coordinating the musculature of the body, especially the neck muscles-the so called "righting reflex". There is a difference that can be measured in range of motion (ROM), for example the rotation of the trunk of the body with eyes straight head arm raised to level of shoulder pointing straight out is compared with eye turned as far in the opposite direction that the trunk is turned, this will show a marked increase in ROM.

Goodheart continued to refine his observations of the "Oculobasic Technique"[4] and the following year in the 1980's Workshop manual; he presented the idea of modular skeletal distortion pattern PRY Technique (Pitch, Roll and Yaw).[5] This would be view by the doctor with patient standing on a plumb line first from the rear and then viewed, laterally from the side. The description of the lateral view prospective follows. The plumb line should line up with the auditory meatus or lobe of ear it should pass down through the glenoid fossa, fall through the center of the femoral head, pass through the center of the knee malleoli and fall just anterior of the ankle malleoli.

This idea is carried forward to the Cloacal and Righting Reflexes are activated when there is a failure of synchronization of the head level to sacral level or visa versa.[6] Sacral level is the Roll pattern stretching the piriformis on the involved side. Weakness is reversed by lateralization of the eyes in one direction. This is challenged in the prone position with the pelvis in a "Logan Basic Technic"; flexed position with pressure is applied to the sacrum in a cephalic direction-lateralized eyes-respiratory challenge with pressure applied to the sacrum.[7]

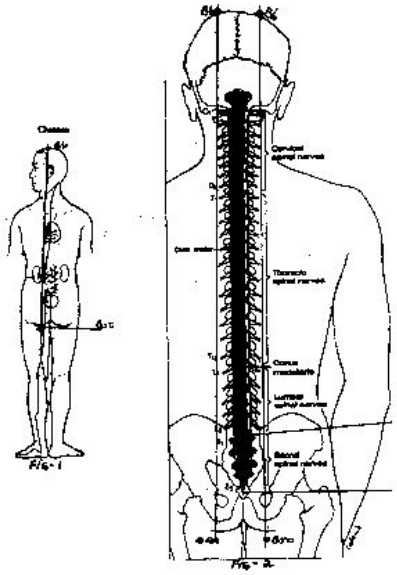
The example given by Goodheart is an analogy in terms of a tanker aircraft attempting to refuel in flight. Both aircrafts must fly a similar pattern in order to successfully refuel. The example given is the sacrum is the fighter aircraft and the righting reflexes of the inner ear and head are the tanker aircraft. The fuel line is the spine connecting both aircrafts. The spine aligns itself with the structure above and the structure below is grouped geometric relationship known as Pitch-Roll and Yaw Technic which refers to the Labyrinth and Righting Reflexes.

DISCUSSION:

Evaluating why these to specific point B6 and B50 effects the whole body and none of the other points on the Bladder's meridian that a reachable by the patient simultaneously have no effect on the Yaw #2 correction.[8] If we review the Leg Greater Yang Bladder Channel, Fig. 1 on the following page it starts at B1 inner canthus of the eye and ascends across the forehead, intersecting Governing Channel (GV) at point GV24 and Gall Bladder channel at GB15. It then crosses to the vertex and again intersects the Governing Channel at point GV20, which give a connection to Bladder meridian to the Governing channel. The next important finding is this channel then enters the internal cavity via the paravertebral muscles, communicates with the Kidneys and finally joins the associated organ the Bladder, this ties the B6 and B50 point to the associated muscle of the Kidney which is the psoas. The Divergent Channel of the leg Less Yin (Kidney) Primary Channel intersects the Bladder on the thigh and proceeds upward connecting first with the Kidney before crossing the Girdle channel at 7th thoracic vertebra which is the associated point of the GV tying this meridian and the Conception Channel (CV). The second CV channel arises in the pelvic cavity, enters the spine and ascends along the back running anterior to the GV channel. The CV associated point is at 6th thoracic vertebra.[9] This also happens to be the pivotal in the action of walking all vertebras rotate forward on the arm forward side of the stride from T6 up. All vertebras from T7 downward to L5 rotate to the side of then anterior leg.[10]

Then next statement ties my theory to the effect of this point on the pattern of dural toque. "It also joined directly with the Brain and Heart."

What I propose is a new channel that is active when neurological disorganization is tied to the Yaw#2 modular pattern. The Bladder energy travels from B1 down to B67 on the outer superficial channel Fig. 2 shows, as the chi energy reaches B6 it enter the brain and travels through sympathetic chains of the cervical, thoracic, lumbar, sacral and coccygeal plexus and then rejoins the superficial channel of the Bladder meridian at B50.



The above illustrations with the permission of , Fig 1-Eastland Press-Diverged channels of Bladder and Kindney, Acupuncture A Comprehensive Text, p 76. Fig 2-The Benjamin/Cummings Publishing Co., Human Anatomy And Physiology 2nd Edition, p 328

I have been observing and correcting the PRY-T Technique and specifically Yaw#2 since 1980 when it was first introduced on every new patient. I have also been observing and checking for switching and Yaw #2 pattern on every visit of every patient for the past 20 years. My observations are almost every patient is switched and the cause is the Yaw #2 pattern 99% of the time. The remaining 1% of switching is either due to Pitch at .75% and Yaw #1 at .25%. The PRY-T modular distortions cause irritation to the dura mater and thereby produce neurological disorganization.

When Yaw #2 is the source of neurological disorganization the patient must maintain contact to with finger tip of both hands to B6 or B50 meridian points as the correction is being made. Otherwise a rebound phenomenon will take place when the patient sits and this will undue all corrections of cranial faults and TMJ.

I made this observation on June 5, 2005, after the comment of my patient, a psychotherapist said that she tell her patient "not to put their glass on the top of their head when they are not using them, because it changes their polarity". It will be seven years that I have been collecting data, by the time I present this paper and the sampling should be over 2100 different patients.[11,12] I have repeated this experiment on all patient that I treated in the past seven years and I would believe it was be safe to say that I done this at least 10 or 15 thousand time with the same results.

CONCLUSION:

All patients should be evaluated for switching on every visit before we start our examination and therapy localization, and just after we have confirmed that the patient's indicator muscle are strong.[13] This was one of Dr. Goodheart's, examination procedures from his Workshop Manuals, but his method of stimulation with a firm rotatory action on both right and left K27 will not correct switching other then changing the weakness of the indicator muscles with K27 is therapy localized. The first Dr. Goodheart's Workshop Procedure Manual that had workshop procedure examination was in 1975 and continued till 1987, this would appear at either the front or rear of the manual. It would always be number #3 of the examination procedure page and stated Use K27 Umbilicus Contact-To eliminate switching and by 1987 it mentioned to use auxiliary treatment T11 transverse and tapping the bridge of the nose for reoccurring switching.[14,15] Finally Dr. Walther suggested not to randomly treat these point till you find the source of switching.[16]

Since this research project started more then six and a half years ago I have only found one case in the 2,100 patients tested, that was not switched, and had no PRY-T pattern present at the time of the first examination. That being said the percentages of neurological disorganizations represented are the following standard K27-99%, crossed K27-25% and laterality of the atlas-70% and in rare instances ionic switching.[17]

If you choose to ignore switching by not TL-K27 (standard form), or check for cross K27, and lateral atlas on every visit. You will get some wrong information and will make a wrong correction, which may be (as examples): wrong side of pelvic category, vector of correction form challenge, side of a cranial fault and leg length that change from supine to prone cause by atlas laterality.

This misinformation while random and usually limited to just a few items during the course of an office visit will not help the patient's recovery and potentially could make their symptoms worse.

The simple fact that checking for these three major forms of switching and correction their causes will probably take all of 90 second if all three forms are present, when done at the start of our examination will guarantee proper treatment and a better outcome for you and your patient.

These facts will be self evident, that more then 90% of patient we treat on the basis of two weeks or more from their previous are switched again. The standard K27 switching caused by Yaw #2 on the left can be done with the patient supine with a broad contact of the Innominate bone on the right with a simple light thrust to the floor while holding B6 bilaterally which is more convenient that B50. This will prevent the rebound phenomena of Yaw #2 and K27 standard switching. Your other choice would be to ignore the PRY all together and any from of switching and take your chances. However, PRY-Technique and rocker action correction are actually method of diagnosing dural tension and dural torque.[18]

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