INTERNATIONAL COLLEGE OF APPLIED KINESIOLOGY U.S.A.

Experimental Observations of Members of the ICAK

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Fifty-Fifth 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, 201

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, 201

Proceedings of the Annual Meeting

Presented:

June 6 – June 9, 2013
Los Angeles, CA

Publications Staff:

Jennifer Palmer, Executive Director
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Message from the Chairman

David Leaf, D.C., DIBAK

For 37 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, and Scott Cuthbert for all their help during the review process. We look forward to seeing you at the Annual Meeting, June 6 – June 9, 2013 in Los Angeles, CA.

Introduction

This fifty fifth collection of papers from members of the International College of Applied Kinesiology®-U.S.A. contains 29 papers written by 19 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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from the publisher. In particular, this policy applies to the reprinting of an original article in another publication and the use of any illustrations or text to create a new work.

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

Management of Postpartum Piriformis Syndrome – A Case Study

Naozumi Arai, D.C.

ABSTRACT:
A case in which the successful diagnosis and treatment of a 34 year old woman complaining of piriformis syndrome after child birth following the Applied Kinesiology protocol. A 34 year old postpartum woman was followed through a six week course of care utilizing applied kinesiology techniques. The patient reported right hip tenderness and pain associated with numbness, tingling sensation to her right buttock, posterior thigh and the calf. Based on her history and physical examination, piriformis syndrome was diagnosed. The patient was treated in 10 office visits during a six week period along with sacroiliac support belt and adrenal supplementation. Following a six week treatment, the patient's initial complaint of piriformis syndrome disappeared. The management of unstable sacroiliac joint is the key factor for the successful treatment of piriforms syndrome. Chiropractic care including Applied Kinesiology approach brings effective therapeutic outcome for postpartum piriformis syndrome.

KEY INDEXING TERMS:
Piriformis Syndrome, Child Birth, Spastic Piriformis, Hypermobility, Category II, Ligament Stretch Reaction, Muscle Stretch Reaction, Adrenal Stress, Sacroilliac Belt

INTRODUCTION:
Piriformis syndrome is a neuromuscular disorder that occurs when the sciatic nerve is compressed or otherwise irritated by the piriformis muscle causing pain, tingling and numbness in the buttocks and along the path of the sciatic nerve descending down the lower thigh and into the leg (1). This is a case study of a patient who suffered from piriformis syndrome due to instability of the sacroiliac joint after child birth.

METHOD:
A 34 year old female patient of my office suffered from right hip tenderness and pain associated with numbness, tingling sensation to her right buttock, posterior thigh and sometimes to the calf. The level of pain was 8/10 on the pain scale. The pain was increased by walking, prolonged sitting and standing. She delivered her first child 42 days before the office visit. The method of delivery was normal vaginal delivery.

On the initial visit, physical findings indicated palpable tenderness over the pirifomis muscle. Yeoman's test was positive on the right. FAIR test was positive on right. SLR was negative. All vital signs were within normal limits. After general physical examination, Applied Kinesiology analysis was performed, including manual muscle testing, Category system pelvic analysis, ligament stretch reaction, muscle stretch reaction and evaluation of adrenal fatigue.

Manual muscle testing indicates weakness of right Gluteus Mediuus, right Gluteus Maximus, right Sartorius, right Gracilis and bilateral Tensor Fascia Lata.

To evaluate misalignment of the pelvis, Category system evaluation was used. Pelvic dysfunction is divided into three categories. Categories I and II are dysfunctions of the sub-assemblies: Category III is dysfunction of the intact pelvic assembly (2).

The patient showed right SI joint one hand therapy localization, short right leg 5cm, tenderness over the Sartorius muscle insertion, weak Sartorius Gracilis and Gluteus medius muscle, inspiration negate TL. This pelvic analysis indicated Category II, an osseous subluxation at the sacroiliac articulation (3). Listing was PIEX on right (4).

After finding the SI joint misalignment, ligament stretch reaction was tested to misaligned right SI joint to detect ligament laxity. It was positive on the right SI joint. A positive ligament stretch reaction is present when muscles that previously tested strong test weak after the ligaments of an associated articulation are stretched. The cause of the positive ligament stretch reaction appears to be generalized stress of the adrenal gland (5).

The right piriformis muscle was strong in clear by manual muscle testing, however muscle stretch reaction was positive. The muscle stretch reaction is associated with the muscle not functioning harmoniously with its fascia, or with trigger points within the muscle. Evidence to examine for muscle stretch reaction is a shortened muscle, local or referred pain, or poor function in the associated organ or gland (6).

Treatment was rendered in a couple of steps in both structural and chemical phase.
The structural correction phase includes spinal adjustment, fascial release to piriformis muscle, and therapeutic ultrasound to sacroiliac ligament, weak muscle correction and support by Sacroilliac belt.

Spinal adjustment was utilized by SOT blocking adjustment to right PIEX (7), manual adjustment to PL sacrum which was found by palpation and challenge.

Ultrasound therapy to right SI joint was utilized to speed up healing process and reduce pain and swelling (8).

Since Sacroilliac support belt in a high position on the pelvis has a significant effect in stabilizing the sacroiliac joint laxity (9), the patient has worn the sacroiliac belt over the sacroiliac joint during this six week treatment period.

In addition to the structural side of the treatment, a chemical phase of disorder = adrenal fatigue was found in this case. Adrenal stress disorder was indicated by: positive ligament stretch reaction; weak right sartorius and gracilis weakness; Cateory II sacroiliac subluxation; positive Rogoff's sign which was indicated by palpable tenderness at the lower rib junction with the erector spinae muscles (10). Adrenal concentrate supplement to the adrenal gland was prescribed during this six week treatment period along with diet change advice. Diet change advice includes avoidance of stimulants for adrenal stress disorder like sugar, coffee, alcohol and soft drinks.

The patient was treated in the same manner for 10 office visits in a six week period.

RESULTS:
She responded gradually and steadily over a six week period and all symptoms disappeared after six weeks from the initial visit. At the last visit (10th visit), she was 1~2/10 on the pain scale: no tenderness on in right hip: no numbness, tingling sensation on right buttock, posterior thigh and calf. The pain was gone during walking, prolonged sitting and standing.

DISCUSSION:
Piriformis muscle syndrome is categorized in two ways. One is generally believed to be "Spastic" piriformis muscle. Spastic piriformis syndrome means over the contracted piriformis muscle compresses the sciatic nerve at the sciatic notch. The other is "Flaccid" piriformis muscle which Dr. Dejarnette of SOT technique suggested that the sciatic nerve entrapment in the sciatic notch is caused by elongation of the piriformis muscle by muscle flaccidity (11).

This case study can distinguished between "Spastic" and "Flaccid" by using muscle stretch reaction. The muscle stretch reaction revealed a previously strong piriformis muscle became weak after stretch, which indicated "Spastic. Muscle stretch reaction is a useful tool to detect "Spastic" and "Flaccid" piriformis muscle.

In this case, I hypothesize the spastic contraction of the piriformis muscle is coming from a compensation of SI joint misalignment and unstable SI joint due to sacroiliac ligament laxity. During pregnancy a special type of hormone called relaxin is produced. Relaxin is a polypeptide hormone produced in the human female by the corpus luteum of pregnancy and the deciduas. The hormone causes muscles and ligaments to relax and stretch throughout a pregnant woman's body (12).

Adrenal stress disorder is a failure of the adrenal glands to adequately produce secretions necessary for body to function in optimal manner (13). The cause of ligament stretch reaction appears to be generalized of the stress of the adrenal gland (5). This fact indicates adrenal stress leads ligament laxity.

This ligament laxity cause a hypermobile SI joint. If this ligament laxity is not treated, the muscles work overtime and the joint re-subluxates as its primary support mechanisms are not doing their job (14).

In this case study, I assumed the cause of the ligament laxity comes from three reasons. First is the SI joint misalignment due to structural imbalance. Second is the laxity of the SI joint ligament caused by relaxin due to pregnancy. Third is the adrenal fatigue due to child birth.

Correcting the structural balance by Chiropractic adjustment, ultrasound and sacroillliac belt successfully managed the structural part of ligament laxity. Adrenal supplement and diet change successfully managed the chemical side of ligament laxity.

CONCLUSION:
Even treatment of prifomis syndrome is sometimes difficult, in this case study, piriformis syndrome complaints were successfully evaluated and managed by Applied Kinesiology procedure.

Not only treating the piriformis muscle, but also treating the root cause (laxity of sacroiliac ligament and balancing structure) was a key factor in successful treatment.

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Mind & Consciousness: Balancing the Mind's Projections and Harmonizing the Creator Within

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ABSTRACT:
According to Dr. Helen Schucman and Dr. William Thetford, co-collaborators of *A Course In Miracles,* "The mind is a very powerful creator, and it never loses its creative force. It never sleeps. Every instant it is creating and always as your will."[i] Schuchman and Thetford continue, "Very few people appreciate the real power of the mind, and no one remains fully aware of it all the time."[ii] Balancing the mind, using the concepts of the 81 Facets of the mind, and the 'mind as the creator', integrated into a Consciousness approach, may effectively bring the patient to a neutral, clear state, and neutralize many of the symptoms, physical and the like, in the patient's outer world.

KEY INDEXING TERMS:
Consciousness, Energy Medicine, The Mind, Course In Miracles, Kundalini Yoga, Yogi Bhajan, PhD

INTRODUCTION:
If it is true that we are all made in the likeness of the Creator, then we are all mini-creators in our own right. The problem is when we miscreate due to faulty belief systems and mental programs. In *The Mind,* Yogi Bhajan, PhD, reveals, "If there is no relationship between you and your mind, then there is no guidance between you and your mind. If there is no consolidated guidance between you and your mind, then your life will be nothing but a disaster for you, for your children, and for your generation to follow." [iii] He later continues, "Your mind is a stream of thoughts, impressions, and reactions."[iv] This is not you, though. You are not that stream of thoughts. Your mind simply belongs to you – it is not 'the you'. Bhajan mentions, "If you do not control your projections and action from a point of equilibrium and awareness, then you surrender your judgmental capacity and your identity! When your habits control you, you are a robotic disaster."[v]

Our outer world is a reflection of our inner world. The body is a learning device of the mind. To effectively create our world, it is necessary to balance the mind, and thus affect its projections. Affecting our external world, including our physical body, entails shifting at the seed level – our internal world.

DISCUSSION:
Schuchman, et al., report, "Thought and belief combine into a power surge that can literally move mountains…People prefer to believe that their thoughts cannot exert real control because they are literally afraid of them. There are *no* 'idle' thoughts. *All* thinking produces form at some level."[vi] However, it is nearly impossible to control one's thoughts. Try to predict what even your next thought will be. It's not as easy as you may think. If thoughts create your world, and thoughts emerge from one's mind, it is of utmost importance to maintain a neutral, balanced mind.

In 1978, the Polaroid was one of the hottest selling tech items on the market. Polaroid made the mistake of thinking the past is the future. As a result, most of 2013's high schoolers have never heard

of a Polaroid. Dr. Goodheart consistently introduced innovative techniques. He even introduced the then-taboo acupuncture meridian therapy from Asia to the western world. In today's ICAK conferences, practitioners, new and old alike, share, entering new frontiers of healing modalities. Honoring the spirit of the trailblazing mentality of the membership of the ICAK, I feel it is appropriate to disseminate on the exotic topic of consciousness in this forum.

The 81 Facets

According to Dr. Walter Schmitt in *Quintessential Applications of Applied Kinesiology*, "The body heals itself if we remove the obstacles to healing, and we can give it what it needs…A condition of dis-ease involves a state of "too much" or "not enough." [vii] For example, in modern neurology, we may have excitation or inhibition. In the endocrine system, we may observe a state of either not making enough hormones or breaking them down too fast, or an overproduction of hormones or not breaking them down fast enough. As practitioners, we strive to bring the system into balance, that is, bring it to neutral. Similarly, we can apply this aspect to the 27 controlling Projections of the mind, as defined by Yogi Bhajan, PhD, in *The Mind*.

Consider the mind to be a diamond, with 81 facets. Yogi Bhajan, PhD, explains there are Three Functional Minds – the Positive Mind, Negative Mind, and Neutral Mind. In the Neutral Mind, the three minds all work simultaneously. Each mind has three impersonal areas – Manas, Ahangkar, and Buddhi. Manas senses records, sequences, and stores actions and reactions. Ahangkar bounds, contains, attaches, identifies and categorizes. Buddhi assesses, discerns, and judges what is really true. The three minds interact with the nine aspects to give a total of 27 Controlling Projections per thought. The three minds together with the Projections give you 81 Facets – "81 ways to project into action as a result of how you process each thought."[viii]

According to Yogi Bhajan, PhD, "When you conquer your facets you speak differently, you pierce the veil of projections, you get into a practical relationship of bliss…You become a balanced human being who is loved, respected, and adored."[ix]

Synopsis of the three functional aspects to the mind:

1.) The Negative (Protective) Mind: given for survival. It is reactive, protective and searches for potential danger. It is sensitive to pain, and it shields you from the forces that may disrupt or destroy. The negative mind calculates risk; it was given as a protection so we may know how things are going to hurt us.

2.) The Positive (Expansive) Mind: searches for pleasure, fulfillment and possibility in how you can utilize things in your experience. It is constructive, risk taking, active. The positive mind calculates benefit; it was given so we can recognize how things can work to our advantage.

3.) The Neutral (Meditative) Mind: judges and assesses without attachment in relation to your own purpose and reality. The Neutral Mind observes the actions of both the Negative and Positive Mind, and judges both in relationship to you Higher Self. The Neutral Mind evaluates risk and benefit; it was given so we can recognize how things relate to time and space. The Neutral Mind serves as a guide. Every though that is realized goes from the negative mind to the positive mind, and it must go to the neutral mind to give you a comprehensive answer of time, space, your environment, and you. The Neutral Mind is unaffected by the polarities of life. The neutral mind allows the one to see the big picture – that there is nothing wrong with life, there are simply experiences. Each experience is

like a wave that is simply part of the larger ocean. The Neutral Mind evaluates the input of the negative and positive minds and accesses the soul. The Neutral Mind allows the yogi to listen to the soul. The neutral mind allows the yogi (or individual) to integrate experiences and find meaning in them.

The enlightened mind is a mind that has all three aspects strong and in balance. It is flexible and creative, and able to reflect the uniqueness of the soul.

On the subject of the imbalance of the Three Functional Minds, the Facets, and the role of the Neutral Mind, Bhajan explains, "The moment the Negative Mind starts to act on the memory of a painful or embarrassing incident; it magnifies the events and tries to protect you. This is its basic function – to give protection to your life. [x] When the Negative Mind goes through the 27 Facets, then suppose the Positive Mind picks up the thought – it supplies every historical incident that supports and expands that pain. Your Positive Mind linked inappropriately to the Negative Mind makes you berserk, depressed, hopeless, and undermines your personality effectiveness. It steals away your courage and becomes your worst enemy."[xi] Bhajan remarks of the neutral mind, "It is in the Neutral Mind that you can be calm and pure and speak directly in the light of your Soul. Then you speak and act from intuition."[xii]

The below descriptions of the 27 Projections are from *The Mind*.[xiii] Each Functional Mind is broken down into its three Impersonal Areas, and each Impersonal Area consists of three Projections, making 27 Projections in all. It should be noted that Yogi Bhajan, PhD, provides a mantra and meditation to balance each projection. I attempt to apply this map of the mind in a 'consciousness medicine' type of approach.

Negative Mind:

Manas – Defender

1. Soldier – Dealing with a threat, assumes you are at risk
    a. Too strong: Overreaction, anxiety
    b. Too weak: Tendency to be a victim, inability to perceive real threats
2. Ombudsman – Dealing with an accident, discovering what you didn't do in order to protect you later
    a. Too strong: Getting distracted
    b. Too weak: You fiddle instead of fix
3. Prospector – Dealing with coincidene- prospecting for what is useful and what is not
    a. Too strong: Doubting
    b. Too weak: Fearful of consequences of own's action; Underestimate others

Ahangkar – Manager

1. Historian – Relay of a Past Memory
    a. Too strong: Fearful of past mistakes and traumas
    b. Too weak: Blind-sided by things you could have avoided
2. Chameleon – Phase of a Mental Projection
    a. Too much: Manipulate and become what others need
    b. Too little: Absorb into others with a loss of self
3. Judge – Shadow of a Mental Projection; Intuits impacts of mental thoughts
    a. Too much: People become socially distant out of subconscious fear of your perception, bluntness, and truth

b. Too little: Sells short the benefits and grace of the universe from your actions – accidents happen

Buddhi – Preserver

1. Runner – Deep Memory of a Past Projection
    a. Too much: Depression, detachment
    b. Too little: Nostalgia, procrastination, regret
2. Integrator – Mental Intersection – resourceful, inventive, expansive
    a. Too much: Act impulsively, feel prematurely complete
    b. Too little: Feel somewhat dependent on others
3. Apostle – Mental Outer Projection; Perception of what is important to preserve
    a. Too much: Miss the cues for action
    b. Too little: Feelings of isolation, detachment

Positive Mind:

Manas – Artist

1. Actor – The Art of Memorizing Creativity
    a. Too strong: Tendency to idealize heroes, teachers, and leaders; Imitating others
    b. Too weak: Self-conscious and too critical
2. Doer – The Art of Creating Art; Oriented Towards a Goal
    a. Too strong: Workaholic; Importance placed on image and things you have attained
    b. Too weak: Lose focus; Failure to complete projects; Not knowing what steps to take
3. Originator – The Art of Creating Creativity; Originality
    a. Too much: Struggling with deeper meanings; feeling of emptiness
    b. Too little: Settling for average; Lack of effort

Ahangkar – Producer

1. Gourmet – Creating Art Through Past Memory; Intensifies Sensations
    a. Too strong: Attachments, especially to miseries of the past
    b. Too weak: Lacking ability to set boundaries of the intense feelings of the past; Inability to set priorities
2. Architect – Creating Art by Environmental Effects; Builder
    a. Too strong: Insensitive to the impact you have on others
    b. Too weak: Having new theories and perceptions, but lacking the risk-taking attitude needed to initiate them
3. Entrepreneur – Creating Art by Projecting into the Future; Alchemist of Your Future Self
    a. Too much: Standing alone in your vision; Cynicism
    b. Too little: Seeking confirmation from others

Buddhi – Missionary

1. Devotee – Pursuing the Cycle of Success; Holding Thru the Ups and Downs
    a. Too strong: Tendency to blame and project on others
    b. Too weak: Judgmental, Bitter, Reclusive
2. Enthusiast – Pursuing the Cycle of Artistic Attributes
    a. Too strong: Subject to fads
    b. Too weak: Satisfied from imagination or from the thought of something without the action
3. Creator – Pursuing the Art of Cohesiveness; Central Focus
    a. Too strong: Detachment; Losing ownership over your creations
    b. Too weak: Mistaking one thought for another

Neutral Mind:

Manas – Strategist

1. Scout – Judging Environment Through the Senses; Steadiness and Strong Nerves Under Stress
    a. Too strong: Search but do not find; Lack of commitment
    b. Too weak: Becoming absorbed or entranced by some part of your environment and forget your own agendas
2. Coach – Judging Environments; Selecting Resources According to Goals
    a. Too much: Relying on yourself too much; Mismanagement of resources
    b. Too little: Missing opportunities that are right before you; Hesitation; Lack of passion
3. Guide – Judging Positive Environments Through Intuition
    a. Too strong: Attached to insights from everywhere; Acting like a psychic
    b. Too weak: Reactive; Drawn away from your path; Confusing flexibility with lack of direction

Ahangkar – Leader

1. Protector – Assessment of the Position; Understanding Your Role
    a. Too strong: Underestimate task
    b. Too weak: Naiveté; Envy
2. Commander – Assessment of the Successful; Optimism and Confidence Towards Goal
    a. Too much: Personal entitlement
    b. Too little: Accepting gifts and successes but stop in motivation, denying the larger goal
3. Pathfinder – Assessment of Personality & Facets Through Intuition; Delivering Your Identity
    a. Too strong: Betrayals and Disappointments from others
    b. Too weak: Influenced by fame and recognition; Underestimation of personal interests of others; Stopping short of final purpose

Buddhi - Teacher

1. Educator – Intuitive Assessment of Personality Defects to be Covered
    a. Too strong: Cynicism; Feelings of not belonging
    b. Too weak: Act only as an instructor – have knowledge but don't chip away at limitations
2. Expert – Interpretations of All Facets of Life; Understanding Relationships Between Many Parts of a Complex System
    a. Too much: Relying on formulas that are inherently ineffable; Classifying the Unnameable
    b. Too little: Accumulation of knowledge without the depth given by experience
3. Master – Assessment of Personality Overlords and Their Projections to be Controlled
    Weak and Strong do not apply – this projection is about devotion, merger, and love. Merger with God.

While Yogi Bhajan, PhD, provides a mantra and meditation to be used by the Kundalini student to balance each Projection, I assume the vantage point of a practitioner with the objective of helping a client, and applying the mind map utilizing a consciousness approach. The client, provided proper instruction from a certified Kundalini yoga instructor, should perform the proper respective meditation on his/her own.

The paradoxical complex yet simple concept of finding the entry point is beyond the scope of this paper, yet I will try to provide a brief explanation. First, the practitioner should find the Entry Point

into Consciousness. I may think of a small pinhole of an opening on the person into the ocean of consciousness and simply drop an 'item' into that opening into infinite consciousness. I discussed a more specific and direct approach using a muscle test last year, which is beyond the scope of this paper. Additionally, this is sometimes a technique best demonstrated as opposed to gleamed from reading a paper.

To find the aspect of the mind that is not neutral, simply scan the list. As this is based on consciousness, you may choose to muscle test the client in a manner similar to NET investigative techniques, or you may simply feel a shift within yourself – kind of like that gut feeling when something is incongruent. It can best be compared to when a client tells you that they knew the indicator muscle would test weak even before the practitioner performed the test. For greater efficiency, instead of scanning the list, you may first scan the Three Minds, and then once you identify the Functional Mind, you may then scan its three aspects, and then finally, that Aspect's Projections, and find the appropriate Projection in this manner.

A proper discussion of finding the access point and dropping into consciousness to effectively neutralize it is beyond the scope of this paper, and was presented in brief in my presentation at the 2012 ICAK- U.S.A. Annual Meeting in Dallas, Texas. The detailed explanation of the concept of 'dropping it in' is beyond the scope of this paper. It is recommended to explore techniques like Matrix Energetics™ and Garcia Innergetics™ for a more thorough understanding of 'dropping it in'. Once the controlling Projection is found, simply (in your mind's eye) drop it into the entry point, and imagine it (observe in your mind's eye) dissolving in the vastness of infinite consciousness. You may equate this with casting a drop of red dye into an ocean and observing it dissolve into the far reaches of the seemingly infinite ocean.

Often, you may notice a very subtle (or not so subtle) swaying or leaning of the client. I often keep my hand on the back client of the shoulder to not only catch the client should he/she begin to fall, but also to feel subtle movement. The client may also take a deep breath or exhale, or even yawn. Excessive yawning while performing this work should not be confused with acidity. The client will often report a greater sense of ease or a state of inner peace – sometimes immediately, sometimes 5-30 minutes later. I will often have the client walk 10-20 feet and report what he or she notices, or what is different from before. This is just one step in an overall process (I utilize a roughly 60-70 page self-made checklist of sorts), and not the entire correction in itself. However, there are times when this one step may be all the client needs.

While the process may seem simplistic, the real key lies in the practitioner's ability to be neutral, or unattached. Centering methods such as yoga, meditation, and self-inquiry are recommended. The practitioner must remain unattached to the outcome, as counterintuitive as this may seem for the uninitiated.

Finding the Creator Within (The Mind):

Ancient Kabbalistic teachings presented today point to cause and effect. Everything you see and experience in this world is something you have created. *Course In Miracles* echoes this theme. Lesson 32 of the daily workbook affirms that one is not the victim of the world he/she sees because he/she invented it.[xiv] Additionally, regarding physical symptoms of the body, *Course In Miracles* states, "Only the *mind* is capable of error. The body can *act* erroneously, but this is only because it is

responding to mis-thought. The body cannot create, and the belief that it *can*, a fundamental error, produces all physical symptoms…The Soul has been created. The body is a learning device for the mind. Learning devices are not lessons in themselves. Their purpose is merely to facilitate the thinking of the learner…This learning device is *not* subject to errors of its own because it was created but is *not* creating…As a learning device, it merely follows the learner."[xv] Continuing, "Correction belongs *only* at the level where creation is possible. The term does not mean anything at the symptom level, where it cannot work."[xvi] Thus, to have any real effect upon physical symptom, one must access the seed, which is the mind.

According to Jaden R. Phoenix, in her lecture series, *Consciousness Magic*, "We simply have to find that place inside of us that actually affects the external world – and when we get to that place and we move something from there, and then BOOM! Right away it's like there is a huge change in the exterior – in what we see outside of us in that hologram that we project."[xvii]

We find that piece of the client that created [symptom, event] in the way that it showed up in reality. Imagine the mind as one giant vast ocean of consciousness. Simply ask (silently) where is that piece of the client (or the client's field) that has created the particular problem you are working to resolve. **Allow** it to come to you, or you to be drawn to it. It often is a subtle feeling.

Once recognized, there are several courses you can take. You may simply recognize it. A small child will act up until he or she receives attention. So simply recognize it, and then amplify that feeling – almost as if you are shining a loving light upon it. You can simply allow it to expand until it feels right (Notice how I used the word 'allow' – you are not actually doing anything but simply bearing witness). You may see what it feels like (or what the pattern visually looks like, depending upon your preferred modality), and then simply ask how would it appear if it was more useful. Maybe it is out of place, and needs a shift towards it proper place. You may simply ask where it needs or would like to go and allow it to shift. Similar to our last exercise, you may notice a shift within yourself, or observe a subtle movement of the client – perhaps an exhale, or slight lean or rocking. Ask the client to walk 5 or 10 feet, and ask what he or she notices. Like the last process, this is simply a single step of the overall equation, although there are many times this is the only 'maneuver' necessary.

CONCLUSION:

Tackling a problem, through consciousness, at the seed of its creation proves very effective and affects other aspects down the line as well as the intended symptom. Of utmost importance, more so than the particulars of any technique, is that the practitioner be in a neutral state.

In close, and in theme with this paper, it is important to remember that everyone and everything we interact with may be our creation or reflection of ourselves. Thus, as *Course In Miracles* notes, "Whenever a man offers a miracle to another, he is shortening the suffering of BOTH. This introduces a correction into the whole record which corrects retroactively as well as progressively."[xviii] Thus, when you help another, you are helping yourself. In terms of efficacy of these processes, I feel it would be an injustice to apply a linear measurement to a non-linear process. It should be noted that this is simply one facet (or 'technique') of the overall consciousness exploration, and not the whole treatment. Although non-linear, it should also be noted that in all cases, when using the entire array of consciousness devices, a minimum of 80% of previously inhibited muscles (in most cases 100%) became facilitated. I would instead measure it using a few short sound bites from the emails of grateful clients who enjoyed first-hand experiences:

"Amazing...I feel really, really good. Like a 300 lb. weight has been lifted out of my spirit."

"I just feel lighter and have let go of a lot of baggage that was weighing me down."

"I feel 80% better. Thank you! ☺ "- from a client who presented with full-blown flu symptoms. She texted this message to me a half hour after our session.

"I feel lighter. I made it through a 2 hour meeting with clarity of thought and I was smiling, so I believe I'm on the mend. I really am grateful." – from a first-time client who entered the office crying from pain and so exhausted she could barely stand. She had a meeting after our appointment."

"I must report that my body on the inside feels alive – like my old self…I can tell things are ticking again that weren't for probably at least a month or so. Thank you a million times over – I feel super energized from the inside which is a great feeling!"

"I slept so good last night...I think I fell into the "hit by a truck" category after the session; however, in a good way. Today I ran my BEST run yet! With only 2 weeks before the half-marathon, I feel the best I've felt all training season! I was always slightly behind, but would "leap frog" teammates here and there, but usually ended up being near the back, but today I was way out in front! So much so my training mentor gave me her gymboss timer for our pace/splits as I lead the pack! I didn't feel I was pushing too hard or anything--I felt AMAZING--in my "wheel-house". I hadn't experienced such all training season, so I know it's because of you and your healing session yesterday. Thank you, thank you Dr. Matt! I feel the 'fog' I was in has and continues to lift."

Note: Dr. Matthew Keschner holds a 'Doctor of Divinity', is a certified Kundalini Yoga Instructor, a certified Sedona Method coach, and an active student of Course in Miracles, Kabbalah, and Garcia Innergetics, and serves as the New York City study group leader for Matrix Energetics. This paper is not biased towards any religious affiliation, nor is it meant to be an advertisement for any of the above studies or organizations.

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Reduction of Systolic Blood Pressure by Precise Respiratory Adjustment of Atlas – A Case Study

Naozumi Arai, D.C.

ABSTRACT:
A case study describing the effect of C1 adjustment to the blood pressure of a 68 year old female patient by using Applied Kinesiology management procedure.

KEY INDEXING TERMS:
Hypertension, Specific Chiropractic Adjustment, Applied Kinesiology, Primary Atlas Technique, Respiratory Adjustment

INTRODUCTION:
Hypertension or high blood pressure is a chronic medical condition in which the blood pressure in the arteries is elevated. Blood pressure is summarized by two measurements, systolic and diastolic, which depend on whether the heart muscle is contracting (systole) or relaxed (diastole) between beats. Normal blood pressure at rest is within the range of 100-140mm Hg systolic (top reading) and 60-90mmHg diastolic (bottom reading). High blood pressure is said to be present if it is persistently at or above 140/90 mmHg. Hypertension is a major risk factor for stroke, myocardial infarction, heart failure, aneurysms of the arteries (e.g. aortic aneurysm), peripheral arterial disease and is a cause of chronic kidney disease. Ordinary management of high blood pressure is medication, lifestyle modification including dietary change, exercise and weight loss (1).

One study describes a significant decrease in blood pressure following specialized Chiropractic adjustment to Atlas =C1 vertebra (2). Another research has seen similar effect (3). This case describes the management of high blood pressure patient by Atlas manipulation using Applied Kinesiology evaluation and adjustment method to see the effect of Atlas precise adjustment to blood pressure.

This is a case study of blood pressure measurement by detecting specific adjusting vector of C1 vertebra and correction of C1 subluxation by using Applied Kinesiology procedures. Then discuss the effect of specific adjustment to an essential hypertension patient.

METHOD:
The patient is a 68 year old female presenting to the clinic with a chief complaint of chronic bilateral neck and shoulder stiffness. Level of pain was 4/10 pain scale. The patient was in overall good health. Upon the time of physical examination her blood pressure showed high, Systolic 161 and Diastolic 91. Pulse rate was 60 which is within normal limit. Her height was 5’2” and weight was 118lb. George’s test and all other vital signs were within normal limits. Orthopedic examination revealed slight decreased left cervical rotation. All other orthopedic test didn’t reveal abnormalities.

Her past history reveals no cardiovascular disease except an increase of blood pressure in the past six months. She doesn't take any medication. With the consent of the patient, we decided to treat her hypertension by adjusting the C1 vertebra during the first two visits (2).

To detect the location and direction of misalignment of the C1 vertebrae, "Primary atlas technique" and "Vertebral challenge" were used. A muscle that previously tested strong became weak when the patient touched an area of dysfunction. The system called "therapy localization (TL)". It finds the location of a problem (4). Positive thumb therapy localization over the atlas transverse process indicated an atlas subluxation. When an atlas subluxation is identified by this TL, the atlas is challenged and adjusted in the usual manner. This procedure is called "Primary Atlas Technique (PAT)" (5). After TL to atlas, check wrist flexor muscle weakness. "Vertebral challenge" is the Applied Kinesiology which detects the vector of spinal adjustment. This method provides information regarding how the subluxation complex should be corrected (6).

The patient showed positive TL on the right C1 transverse process by PAT. Vertebral challenge was tested on five vectors with the patient in a supine position. The five vectors are 1) toward straight medial 2) toward 15 degree anterior medial 3) toward 45 degree anterior medial 4) toward 15 degree posterior medial 5) toward 45 degree posterior medial.

A non-forceful technique called "Respiratory Adjustment" has been developed in Applied Kinesiology for vertebral correction when force is contraindicated (7). We need to use extra caution during adjustment of the cervical vertebrae of high blood pressure patients even though all available evidence demonstrates that there is just an extremely small risk of major complications from chiropractic neck treatments (8). Therefore non-forceful respiratory adjustment was used for this case. The patient was rested on supine position for five minutes after adjustment.

The patient was adjusted twice at one week interval.

RESULTS:

Primary atlas technique reveals positive TL on right. Vertebral challenge showed maximum weakness at toward 45 degree anterior medial direction. This indicates ASRP C1 by Gonstead listing system (9). C1 vertebra was adjusted toward anterior medial direction by non-forceful respiratory adjustment.

After first adjustment, her blood pressure decreased from Systolic 161 Diastolic 91 Pulse rate 60 to Systolic 140 Diastolic 86 Pulse rate 59.

One week after the first adjustment, a second adjustment was done using the same procedure. On the second visit, her blood pressure was Systolic 154 Diastolic 87 Pulse rate 59 before adjustment. After second adjustment, Systolic 133 Diastolic 81 Pulse rate 59.

In these two visits, adjustment to the C1 vertebra significantly decreased Systolic blood pressure, but no significant change to Diastolic pressure and Pulse rate was observed.

DISCUSSION:

Studies of chiropractic adjustment and hypertension describe that chiropractic adjustment lower the blood pressure. (2, 3, 10, 11, 12). However, effective adjustment vertebra segments are described vary. Some research reveal upper cervical adjustment lower blood pressure (2, 3), hence upper thoracic region decrease blood pressure (10, 11). A common cranial fault found with high blood pressure in Applied Kinesiology is the glabella fault (13).

Communication by parasympathetic nervous system, sympathetic nervous system, and sensory pathways is essential for coordinating cardiac tone with the physiology of the whole organism. The parasympathetic innervations to the heart come from cardiac branches of the vagus nerves. The terminal fibers of these vagus branches are most numerous at the sinus and atrioventricular nodes (14). The parasympathetic nervous system decreases blood pressure and cardiac output and increases the activity of the digestive system via vagus nerve. The sympathetic nervous system controls the increase of cardiac output by vasoconstriction of the peripheral vasculature to divert more blood to muscle and nervous tissue. The overall effect is a change in the systemic blood pressure (15).

Because upper cervical subluxation can disturb vagal function and upper thoracic subluxation can disturb sympathetic innervations to the heart, both upper cervical subluxation and upper thoracic subluxation affect blood pressure.

This case study indicates the effect of C1 chiropractic adjustment to the parasympathetic nervous system via the vagus nerve.

Adjusting the C1 area should be very specific because maintenance of upper cervical function is paramount to normal function of the nervous system (16). Specific chiropractic adjustment like the upper cervical technique, Gonstead technique use X-ray and instrument in addition to palpation to detect the precise vector of adjustment. As an alternative to this evaluation process to detect area and vector of adjustment, Applied Kinesiology evaluation was effective. Applied Kinesiology evaluation could gain positive result to decrease systolic blood pressure as a specific chiropractic adjustment technique to the C1 vertebra.

CONCLUSION:

Respiratory adjustment by precisely adjusting the vector for C1 vertebra detected by the Applied Kinesiology method significantly decreases systolic blood pressure of the patient. This result indicates that chiropractic is a natural treatment option for lowering high blood pressure. This study also indicates Applied Kinesiology evaluation is effective in detecting the location and vector for specific adjustments.

Even if this case study was successful in the treatment of high blood pressure in a patient, further study is needed to establish a relationship between the adjustment of atlas and blood pressure.

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Division II

Critical Review Papers

A New and Highly Effective Way to Correct Yaw #2

Paul Sprieser, D.C., DIBAK

ABSTRACT:
A new method that was discovered in August 2012 that allows your patients to self-correct this most persistent and recurrent modular distortion pattern of Yaw#2.

INTRODUCTION:
Due to a recent introduction to a group of psychologists who use Thought Field Therapy (TFT) in their practices I was asked to join them in teaching this technique, because of my knowledge in Applied Kinesiology and my association with Dr. George J. Goodheart. These three psychologists had developed a system they call Touch and Breathe (TAB) while contacting the acupuncture point that is used in Dr. Callahan's system of TFT[1], which is highly effective in treating many emotional problems. They have called this system of treatment as Evolving Thought Field Therapy (EvTFT).[2]

After three meetings at my home/office to watch the application of this technique on patients, with their treatment system of EvTFT I recognized that we had to standardize terminology so we would be presenting information that was not in conflict. There seemed to be mixing of the terms, switching and ionization as being used interchangeably. This seems to come about, because all those who have studied TFT did it with Callahan, but have not studied a Basic 100-Hour AK Course, and are misinterpreting what these terms mean.

A patient who was an occupational therapist had taken a weekend course known as the Emotional Freedom Technique (EFT) [3] and offshoot of TFT, similar to Touch for Health.[4] It was an offshoot of AK. She asked me if I could correct the Yaw #2 pattern in a standing position. I tried a standing correction with her and it worked, so I experimented with this method for a few months. It was a little more effective than doing it with the patient lying on the table. However, when I demonstrated this method to the psychologists they felt that the contact to pelvic region might create some problems under their state license.

So I thought about this and on the day before (8/4/12), our third meeting I experimented with having the patient stand and place the left leg forward about half a step and torque their pelvic region forward to the right four or five times and this worked. As the old expression goes "necessity is the mother of invention", a new and most successful method has been found. This is the discussion of this research paper.

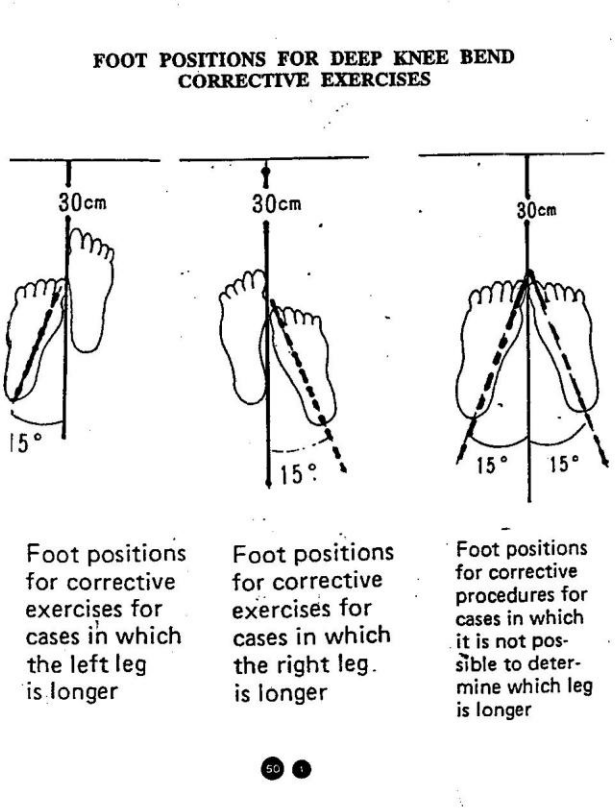
DISCUSSION:
I have been researching the modular distortion patterns of Pitch-Roll and Yaw since 1980 when Dr. Goodheart first introduced it in AK in his Workshop Procedural Manual, 17th Edition.[5] I had written 12 research papers that address both connection of standard switching and PRY-Technique.[6] I presented this at the last ICAK-U.S.A. Annual Meeting in Dallas, Texas on June 2, 2012, in a paper titled "Connection of Bladder Meridian Points B6 and B50 to Reoccurring Switching and the Yaw #2 Modular Distortion Pattern".[7] The conclusion was that every patient we see is switched (standard

K27), and has a Yaw #2 pattern to the left with rare exception. I also pointed out that with rare exception every person takes a long step with the right leg (Isogai's Dynamic Therapy) as present in 1983 Goodheart's Workshop Procedural Manual page 27.[8] Dr. Goodheart's observation of stride length in 1983 was that 45% of patients took a long stride with the left leg and 45% took a long step with right leg and 10% had an even stride.[9] Dr. Kimiyoshi Isogai who had observed stride length for 40 years stated that 70% of patients took a long stride on the left and 30% took a long right stride.[10] Dr. Goodheart's comment was that Isogai's observations were not made on Caucasians.

However, my observation has been done on every patient visit for more than twenty years looking at Yaw #2 and stride lengths, which amounts to 75,000 times. What I have observed that at least 90% of patients, including left hand dominant, took a longer right step and had a Yaw #2 to left, meaning the pelvis is carried forward to the right in the transverse or horizontal plane.[11]

A number of studies that Goodheart referenced in his Workshop Procedural Manual in 1983 pointed out that that stride length, step length, cadence and velocity were not equal.[12] Another study stated there has never been a record of successive steps that are absolute duplicates of each other, nor one where the right foot has precisely the same pattern as the left.[13] Goodheart's weight balance on computerized weight balance scale showed an average of 10 pounds to the right heavier because the liver is on the right.[14] Taking into consideration that right handedness is the dominant pattern in 85% to 89% of any sampling; this should also carry through right footed and dominant leg.[15] It would seem the evidence presented should account for what I had observed and that Dr. Goodheart always quoted the Latin, "the facts speak for themselves" (res ipsa loquitur).

Goodheart had demonstrated the importance of gait and stride lengths in his Workshop Manuals and in seminars. If you were fortunate to have seen Goodheart examine doctors during 1980's seminar programs he would make corrections and then ask the doctor walk up and down the aisle, and then re-examine and show the return of the problem. He would then ask the doctor to walk backwards and show that this could correct the problem. Many methods were suggested to correct the discrepancy in stride length some were active such as waking with a longer left stride on a regular basis. Passive method were to use such as having the patient laying on the SOT blocks one under the short stride femoral head and the other block under the contralateral shoulder with two tennis balls tied in a sweat sock placed under the occiput in the supine position and rest in this position for 10 or 15 minutes. This with the breathing respiratory cycle would allow the dura to de-torque and help to even out stride lengths. Finally Goodheart introduced the observation of Isogai and The Isogai Dynamic Therapy, which required an exercise of squatting with the short stride leg placed forward and the long stride leg placed at a 15 degree medial rotation with the big toe pointed toward the forward foot the beginning of the arch. This diagram is from the seminar notes done by Dr. Goodheart, titled "From Head to Toe Seminar", held in New Jersey, Nov. 2-3, 1996. This section was the use of walking gait to improve your patient's health.



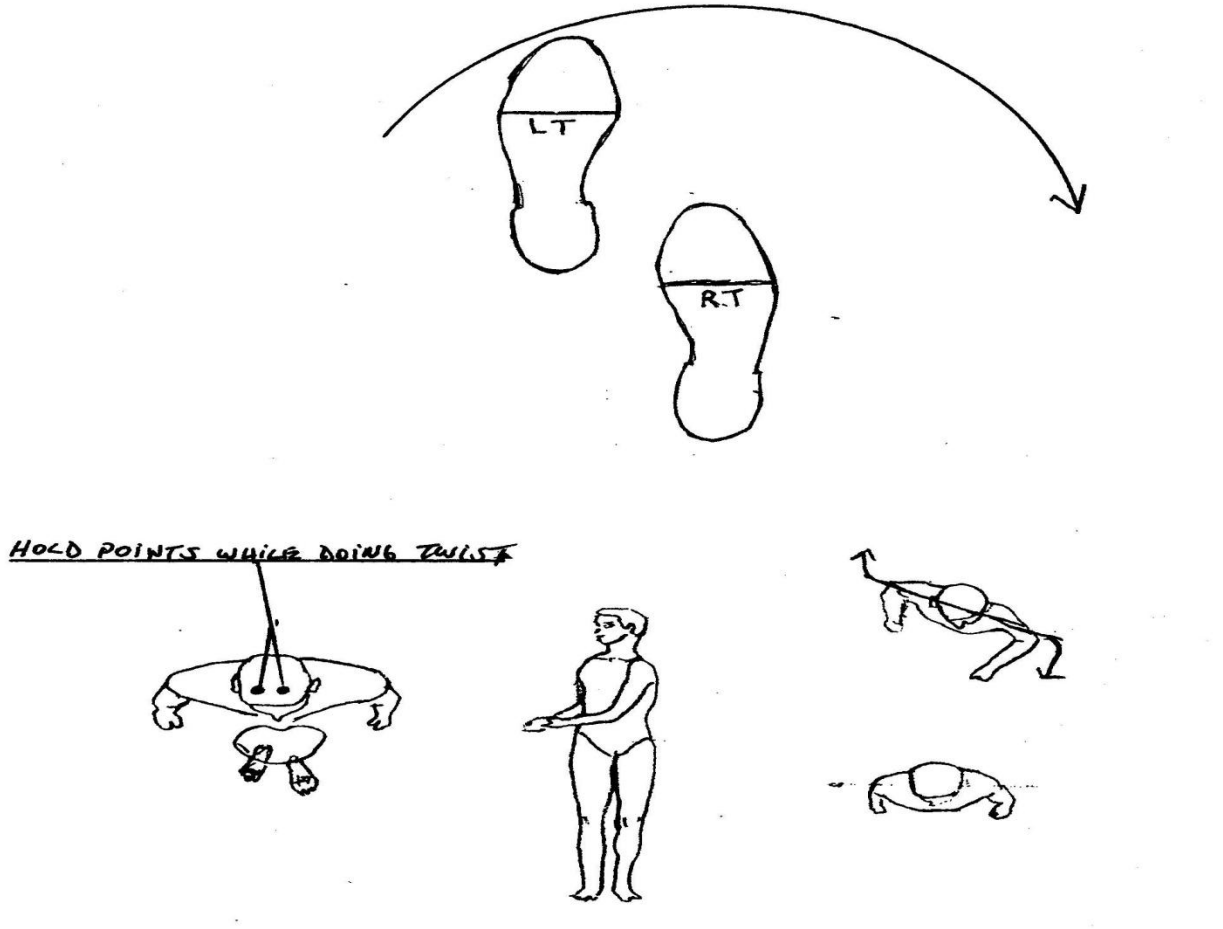
This exercise was to be done with the foot in the prescribed position with both arms elevated horizontal. The patient does knee bends 15 to 20 repetitions, twice a day, once in the A.M. and once in the P.M.

METHODS:

I discovered a simple method of correction of the Yaw #2 modular distortion pattern that the patient themselves can do that is even more effective than the doctor doing the correction. I instruct the patient to stand with feet placed at a shoulder width apart. The patient is directed to take approximately a half-step forward with the left foot if it has been determined that (Isogai) longer step is taken with the right leg. The longer stride can be determined by visual observation of a stride taken with right leg and left arm forward and marked and then left leg and right arm forward. In Walther's Synopsis he states that the psoas and piriformis will test weak on the side opposite the long stride. Foot turn in from internal thigh rotation will be restricted on the side of the tighter or stronger psoas. He also showed that by using DeJarnette block under the side of the longer stride at the acetabulum pushing the femoral head forward and another block under the contralateral- shoulder, mimicking a stride would weaken a strong indicator muscle dural tension is present or dural torque.[16]

OVER STRIDE CORRECTIVE EXERCISE

Exercise program done twice a day morning and evening. Twisting movement of the torso and pelvis-done only to the right with 3 to 4 repititions with a quick snapping action.



With the left foot a half stride forward of the right foot the patient is directed to rotate the pelvis and torso to the right or clockwise with a snapping action three to four repetitions. Patient must only torque from starting position of the left hip forward to the right and return to starting point and not to rotate beyond the starting point. The patient must hold contact with both hands to Bladder point B6 or B50 while the torque is being done. This will make the correction and prevent the return Yaw #2 pattern.

CONCLUSION:

The method that I had just described has been tested on over 250 different patients for over four months and has corrected Yaw #2 modular distortion, dural torque, gait and stride discrepancies and standard switching in 100% of patients tested. When patient use this method it seems to stabilize most chronic and reoccurring structural problems. The method is simple and takes no longer then five seconds and puts no strain on the knee joints. Its simplicity usually leads to compliance by the patient if you can get the patient to remember to use this twice a day upon rising and just before going to bed. I suggest that the patient does this every day for at least one month and then use it periodically a few times a week from then on.

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Academic Performance Enhancement Using Chiropractic Manipulative Therapy and Applied Kinesiology

Matthew Peahl, D.C.

ABSTRACT:
Objectives: The purpose of this case report is to describe the effectiveness of chiropractic manipulative therapy in an academic setting.

Clinical Features: After receiving several prior successes with digestive complaints, allergies, and sinusitis to name a few, a very healthy teenager presents complaining of distress while reading in a test taking environment.

Intervention and Outcome: The patient was provided chiropractic manipulative therapy including high-velocity/low-amplitude spinal manipulation based upon Applied Kinesiology manual muscle testing. The patient demonstrated tremendous improvement in her rate of reading after one session. Four weeks later she increased her ACT score by six points.

Conclusion: For this patient, chiropractic care guided by Applied Kinesiology evaluation proved very successful for reading and academic performance.

KEY INDEXING TERMS:
Kinesiology, Applied, Chiropractic, Manipulation, Spinal, Performance, Academic, Performance, ACT

INTRODUCTION:
A 16 year old female presented in good health with the complaint of distress related to preparing for a specific section of her ACT (originally named American College Testing). ACT is a standard test for high school achievement and college admissions in the United States. In 2011, ACT (1,666,017) surpassed SAT (1,664,479) in the number of students that took the exam. There are four original sections to the ACT: English, Mathematics, Reading, and Science Reasoning. An optional writing section was added in 2005, mirroring changes to the SAT that same year. The section she was having most difficulty with was reading and comprehension.

The reading section consists of answering 40 questions from four passages within 35 minutes. The passages are from four different areas of interest: prose fiction, social science, humanities, and natural science. Her complaint was having enough time to read and comprehend the material in the time allowed to complete the questions. With enough time to read, she had little difficulty in answering the questions. At the time she had presented her complaint to our office she had taken the ACT exam two times, each scoring 27 out of 36 possible points. The mean composition score for the ACT of all sections is 18 with a standard deviation of six. In 2009 the average score in reading was 21.4. Her scores already place her at the 82 percentile, meaning 82% of tests takers scored below 27 in reading. This score places her between the “selective” and “highly selective” schools according to

the ACT Assessment Student Report. Needless to say this patient did not seem to struggle compared to the average person, including her mother who felt her daughter's scores were great. Regardless, the patient was distressed over her perceived lack of ability to complete the exam in the time given.

She originally presented to our office over one year prior with complaints of chronic sinusitis, allergies, and digestive complaints. Under care of our office her digestion improved, her sinus complaints resolved, and she became less reactive to allergens. Two months after she began care, she presented with the complaint of grass allergies. Utilizing various techniques in Applied Kinesiology (AK), in particular Ocular Lock (OL), she was no longer aggravated after a single treatment. Thus, she had been under care of our office for more than a year and has made great advances in the quality of her health and well-being over this time.

Upon examination she showed no change to her Rectus Femoris, being used as an indicator muscle (IM), when she Therapy Localized (TL) Kidney 27 (K 27) acupuncture points bilaterally in all possible positions (palms down, palms up, one palm up and the other down, all previous repeated with eyes closed, and cross TL palm up and down).

We hypothesized that if we could find Hidden Neurological Dysfunction related specifically to reading, and identify the cause, the associated distress could be relieved and she would be able to perform better. We had the patient read paragraphs from her ACT study guide book as fast as she could, without concern for how much she retained. We allowed her one minute to read through as many lines as she could.

Her first attempt she read 25 lines within the given minute. Immediately after this, she showed a positive TL to K 27, suggesting she has a Hidden Neurological Disorganization pattern associated with reading. David Walthers explains that many problem patients which do not respond to treatment are not being examined within the parameters in which they live. In a student's case, they live in the books.

TREATMENT:

We utilized OL as taught in Timothy Francis' Basic AK 100-Hour Course when a positive K 27 TL was found. TL was used to confirm the appropriate spinal location to correct the associated OL positional dysfunction. Palpation and challenge was used to identify the specifics of the restrictions and vector for Chiropractic Manipulative Therapy (CMT). After each correction, and the successful elimination of a positive TL to K 27 in any possible hand position, the patient would repeat the reading exercise until another positive TL to K 27 was obtained to be corrected.

Her first round she obtained 25 lines, revealing a positive K 27 TL. Eyes held up and to the right created inhibition of her Pectoralis Major Clavicular muscles used as IMs. This dysfunction was corrected with CMT to her C0-C1 joint. The OL was corrected and K 27 did not TL. Her second attempt she did not produce a positive TL to K 27 by reading 32 lines in one minute. Her third try she read 35 lines, but it wasn't until she read 38 lines on her fourth reading that she produced another positive TL to K 27. This method was repeated until her reading plateaued and TL to K 27 could not

affect an indicator muscle. Six CMT corrections were made in total including spinal segments C0-C1, S1, T2, T8, and L4.

OUTCOME:
By the end of the 30 minute treatment session the patient had increased the amount of lines she could read from her ACT study guide book from 25 lines which elicited a positive K 27 TL to 125 lines that did not elicit a positive TL to K 27 after three attempts.

She returned one week later for follow-up evaluation reporting that she had taken a reading and comprehension exam earlier that week. She was thrilled to say that previously she regularly had difficulty finishing those exams on time, however this time she finished more than ten minutes early and found the exam to be noticeably easier than she had previously experienced.

Examination revealed no positive TL to K 27 when testing with an IM. Introduction of the stressor, reading as many lines as possible in a minute, did not create a positive TL to K 27 after five attempts. She was reading at that time 85-89 lines a minute.

She returned to our office in total of three times after the first treatment prior to taking the ACT for her third time. Each of the follow-up visits was the same in that reading at maximum capacity could not elicit a positive TL to K 27 with hands in all possible variations. Treatments were provided for other findings utilizing posture and pulse point analysis.

Immediately after receiving the ACT results from her third sitting, the mother contacted us to reveal the results that her daughter had increased her reading score by six points to a 33, moving her up to the 97th percentile. The mother at that time reported that when they had looked into tutoring for the reading section with professionals, the best that five weeks of intense work could achieve is a five point increase.

The following is a testimonial from the patient:

Hi Dr. Peahl,
Here is the testimonial-style write-up I have:
Dr. Peahl has helped me improve my reading pace. I had been struggling with the reading section of the ACT standardized test because I could never finish reading in the time limit. After working with Dr. Peahl, I was able to read more and more of the required passages in the allotted time. I started out reading only 20 lines per minute, and actually moved up to over 100. I am reading so much faster- the improvement is undeniable. My ACT Reading score improved 6 points.
Thank you for the help!

DISCUSSION:
Very little time, effort, and cost when compared to five weeks of intense tutoring yielded very desirable results to this patient. The United States has an accumulative 17% increase in developmental disabilities, including learning disabilities, according to the Centers for Disease Control. The services offered by AK physicians utilizing CMT may offer great benefit to this growing trend.

This procedure has been repeated amongst student populations with desirable outcomes. However, none with as profound of results as discussed here. Reasons include the diligence of the patient in taking notice of changes and having the appropriate parameters to test the efficacy by other means than had been utilized in our office. Another element that is very crucial to consider is that the patient had been under care with positive outcomes in the past. This suggests two possible underlying criteria. First, during the time she has been under the care of this office she had become a much healthier and performance-ready individual. Secondly, her positive experiences in the past may have created great confidence within the patient toward the treatments delivered. These two reasons may trend this particular patient to greater results than those without similar experiences.

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Additional Factors to be Considered in Cervical Spine Manipulation Safety with Spontaneous Dissections of Carotid and Vertebral Arteries

Paul Sprieser, D.C., DIBAK

ABSTRACT:
The simple fact is there is potential danger of overlooking or misdiagnosing spontaneous arterial dissection of carotid arteries (CAD) and vertebral arteries (VAD). A new set of variables have been added to a long list of potential causes and that being pregnancy and systemic lupus erythermatosus. A simple questionnaire can be used to safeguard the patient as well as the doctor from a tragic outcome.[1]

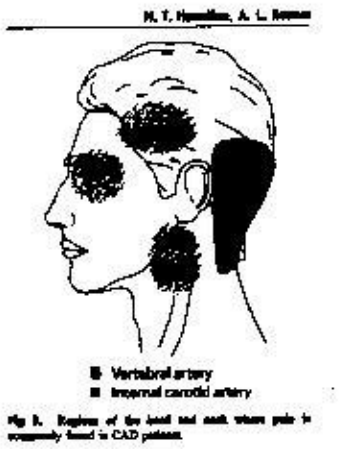
INTRODUCTION:
An interesting article was published December, 2012 in the Journal of Chiropractic and Manual Therapies, which described a case study of internal carotid artery dissection following chiropractic cervical manipulation of a pregnant woman with Systemic Lupus Erythematosus. The case described a 31 year old female, pregnant at approximately 16 weeks gestation. She came to the chiropractor for treatment of occipital headache. It stated that she experienced severe right sided anterior neck pain, and rapidly developed ipsilateral Horner's Syndrome.[2] Upon examination at a hospital ER an MRI revealed extensive dissection of the right internal carotid artery, extending from five cm distal to the carotid bulb to the horizontal intrapetrous segment. The good news in this case was the women survived with conservative treatment. She was first treated at the hospital in the intensive care unit with (IV) heparin. During treatment it was noted a flare-up of SLE, evident by increase in blood pressure and deterioration in renal function. Four days after onset of the neurological symptoms she miscarried. After discharge she remained on Warfarin for six months and still has persistent Horner's syndrome a year later. The follow-up MRI showed a focal false aneurysm cause by the dissection.

Other cases reviewed in this study of internal carotid artery dissections include one antepartum case reported[3] described, a 38 year old women in her fifth pregnancy at 21 weeks of gestation, who presented with headache and a spontaneous left internal carotid artery dissection. In 22 additional cases reported of postpartum carotid artery dissections reported 2 to 21 days after delivery to the onset of symptoms. Possible contributing factors in these cases could be due to the deliveries and pre-eclampsia, infection, gestational diabetes, rheumatoid arthritis and Ehlers-Danhlos syndrome.[4, 5] None of these other cases reported had anything to do with chiropractic cervical manipulation. The question being posed here is, is pregnancy a causative factor for these spontaneous dissections in CAD or VAD?

The additional cases of craniocervical arterial dissection were reported with SLE, which may be connected to hypertension, cortisone use and abnormalities of blood lipids.[6]

DISCUSSION:
Should chiropractors concern themselves with the likelihood that pregnancy could be a perceptive factor for dissection of the cervical arteries? I believe that we don't need to worry about this factor

as long as we follow simple precautions, and use this questionnaire to rule out the possibilities that the patient's symptoms of neck pain or headaches is due to subluxation rather than dissection of arteries.



Above illustration with permission Fig. 3, Journal of Chiropractic Medicine, Elsevier Publishers, "The Etiology of Cervical Artery Dissection."[12]

Differential Diagnosis of VAD and CAD[12]

- **Headaches sub occipital, around the eye and temple. Greater then usually experienced.**
- **Neck pain severe than ever before**
- **Dizziness**
- **Tinnitus**
- **Numbness**
- **Double vision**
- **Balance problems**
- **Muscle weakness**
- **Syncope**
- **Loss of taste and smell**

If the symptoms listed above and on the questionnaire are greater than six months in duration I would believe it is much less likely due to dissection of these arteries.

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 syndrome, SLE			

The obvious factor in this case study is the Systemic Lupus Erythematosus (SLE) and not the pregnancy,[7] and this case history is sketchy and doesn't give sufficient information on the chiropractic treatment history of this patient. As a legal expert in cases of chiropractic malpractice I would need to know a lot more about this women chiropractic history such as, was this treatment the first time she saw this chiropractor, or had she received other cervical manipulation before this incident. The case history stated that she experience symptoms immediately after treatment. This would mean that it occurred while she was on the chiropractor table, but was this actually the case? The most important facts in this case was the patient history of SLE, which is a known connective tissue disorder, with her history of renal involvement, hypertension, use of prednisone, and episodes of deep vein thrombosis and pulmonary embolism. The other red flag in this case is her history of migraines, all of this information and her age should have put the chiropractor on guard in applying cervical manipulation.

Other factors in this case stated that dissection of the internal carotid artery accounted for 20% of all ischemic strokes in young adults. This article comes from Australia so the statistic might be different than what is seen in the United States according to the CDC reported information. This article stated that in a population-based study the average annual incidence rate for spontaneous internal carotid artery dissection was 1.72 per 100,000 or 17 cases per million. This information seems to be considerably less than the incidents seen in the USA which give the statistics of occurrence at 2.6 to 2.9 per 100,000 or about 28 cases per million.[8,9] The difference cannot be to the size of population with Australia reporting 22,015,576 as of July, 2012 and the US at 315,154,857 as of Jan. 13, 2013. This should mean that Australia might expect 374 cases and the US might expect 8,820 per year and some will seek chiropractic services for their symptoms.

This article points out there is no evidence of excess risk of VAD associated with vertebrobasilar stroke being connected to chiropractic care compared with primary care physician visits.[10] Another retrospective case-control study found an odds ratio of 12.9 (p=0.009) for (CSM) in individuals less the 55 years of age that caused dissections of the craniocervical arteries.[11] The Journal of Neurosurgery article of Sept. 16, 2011 had pointed out that the incidents of cervical manipulation being related to VAD or CAD, is likely to have occurred in 1 per 6,000,000 adjustments. This would mean that chiropractors will be involved in about 54 cases per year and this seems to fit the number of malpractice suits filed.[12, 13]

Another study on the etiology of cervical artery dissection showed some sixteen different variables that may set the stage for this occurance.[14] Testing in the form of placing the head and neck in extreme extension and rotation known as Provocation tests to replicate the risks associated with cervical spine manipulation can place greater strain and risk of causing a problem making it problematic rather than preventative in uses. Finally a study at the University of Calgary revealed through an experimental study with arterial models showed that 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 that could cause dissection.[15]

CONCLUSION:

For at least 88 years chiropractic cervical manipulation has been cited as a cause of strokes due to dissection of the carotid or vertebral arteries. After reading hundreds of articles from various Journals: Medical, Physical Therapy, Osteopathy, and Chiropractic, along with newspaper articles, television programs have reported the incidents of one stroke per 20,000 adjustments to one per 6,000,000. But no definitive answers about the part that cervical manipulation plays as a causative

agent in this condition. The truth about the safety of cervical manipulation is that it is unlikely that the adjustments would cause CAD or VAD unless other underlying condition are present in the patient when they come in for treatment of neck pain or headaches. A variety of additional symptoms that may bring patients to a chiropractor's office for treatment included dizziness, tinnitus, numbness, double vision, balance problems, muscle weakness, syncope and loss of taste and smell. Many of these symptoms are commonly treated by chiropractic spinal manipulation. Pregnancy was brought into this discussion due to this one case. However the underlying problem of SLE is the causative agent for weaken of the carotid artery intima. A careful case history should have uncovered the connective tissue disease, history of migraine headaches. Additional information should come from blood levels of C-reactive protein (CRP), increased levels of homocystein, hypertension, cortisone use for autoimmune diseases, oral contraceptives and use of anticoagulants drugs for variety of heart disorders.

This type of stroke that can occur for arterial dissections of CAD and VAD are primarily occurring in young adults 45 and younger the range would be 30 to 45. However in the US, there are a total of 795,000; these are divided into categories of 13,000 cases under age of 19, young adults 30-45 about 12,600, and the remaining 742,400 will fall into older patient and traumatic accidents. Stokes in general, according to the CDC records, show a death rate of 143,574 or about 18% of the total number of cases reported. 65 and older age group are susceptible because of atherosclerosis change in the vessels of the neck along with postural changes, correction of which can place strain on these arteries.

A careful consultation and history of patient's health issues regardless of age, is important to avoid arterial dissection and stroke. Coupled with a proper physical and structural examination and the use of the questionnaire in pregnant women and males in the 30 to 45 age range where CAD and VAD are more common should help eliminate chiropractic involvement in these cases. Bottom line is that underlying diseases are the predisposing and causative factors, that cervical manipulation could trigger the dissection of these arteries. Cervical manipulation in the light of these potentially causative factors can only make matters worse. Perhaps to paraphrase the lyrics of a popular standard song "Fool Rush in Where Angels Fear to Tread," is the best way to state this fact that cervical manipulation is absolutely contraindicated in this situation.

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AK Assessment and Treatment of Inflammation in the Brain - The So-Called "Brain on Fire" Syndrome

Walter Schmitt, D.C., DIBAK, D.A.B.C.N.

ABSTRACT:
Brain function may be compromised by three major factors: 1) neurotransmitter imbalance usually a combination of excessive and lowered neurotransmitter activity, 2) inflammatory activity inside the brain, associated with microglial activity, and 3) neuronal firing rates which are dependent on both afferentation and the metabolic activity of the neurons themselves.

INTRODUCTION:
Many patients have brain and brainstem issues playing a fundamental role in their problems, regardless of the nature of their complaints. Fundamentally, almost any physiological activity can affect brain function and brain function can, of course, affect any tissue in the body. Three factors affecting the brain: 1) neurotransmitter (NT) imbalances, 2) inflammation (locally created in the brain from peripheral influences on microglia), and 3) altered peripheral and central sources of neuron firing must be identified and corrected for a complete resolution of these problems.

These factors may be identified by a unique method of identifying brain involvement using manual muscle testing (MMT) and AK procedures. The supraspinatus (brain related muscle) is often strong to initial testing and to 51%er testing with therapy localization (TL) to the brain Chapman's Reflex (CR) at the coracoid process. However, in "brain on fire" patients, the supraspinatus will often be increased in function. This is seen when the supraspinatus does not become inhibited by muscle spindle cell activity to create autogenic inhibition
(AI - e.g., muscle spindle cell stimulation to weaken) and has also been called "biased toward facilitation". (1) This pattern is often only identified when first rubbing the brain CR for several seconds, and then immediately testing the supraspinatus with muscle spindle cell activity to weaken (AI) and finding that it does not become inhibited immediately following this procedure. In this situation, the indicator of brain function that must be used is TL to the brain CR with one hand and challenging as described below while testing anther muscle.

To obtain a clear understanding of brain dysfunction, the neurological and inflammatory effects of injuries must be corrected prior to investigating brain function. Failure to correct injuries (recent or ancient) by injury recall technique, nociceptor stimulation-blocking technique, and/or set point technique (as in the Quintessential Applications Protocol Step 4) (2) will result in confusing and often contradictory findings on the procedures outlined below.

Similarly, "switching" factors may need to be addressed in order to avoid contradictory findings in brain assessment. Correcting injuries as mentioned above will clear some "switching" patterns. In the Quintessential Applications Protocol (2) "switching" is shown to include several different K-27 patterns as well as the hyoid. The clinical patterns associated with the small intestine (QA Steps 5 – bad dietary fats, QA Step 6 – food allergies, and QA Step 23d – excess sugar affecting the ileocecal valve) will also create "switching." Some of these issues may be identified in the procedures below,

but to ascertain the proper hierarchy of treatment, they should be considered and corrected, if present, prior to proceeding with the correction of those factors affecting the supraspinatus CR.

Sympathetic or parasympathetic imbalances in any organ may produce systemic inflammatory cytokines that often impact brain function. Similarly, sensory signals from a dysfunctional organ can reach the brain and further aggravate the brain imbalance. Most often, the inflammatory and sensory neurological signals parallel each other to adversely impact involved brain areas. (3)

The supraspinatus is the AK muscle related to the brain. As mentioned above, brain issues are accompanied by either a weak (inhibited) supraspinatus (on the side of brain involvement) or an over firing (biased toward facilitation) supraspinatus that will not weaken on autogenic inhibition. The supraspinatus may also show a pattern of normal weakening on AI but will be unable to be inhibited by AI following brief stimulation (about two seconds) to its Chapman's reflex (CR).

In any case, the doctor may monitor the three main factors of brain dysfunction by using TL to the supraspinatus with the offender(s) that causes weakness. During the positive challenge(s), corrective substances and procedures may be identified by challenging to negate the weakness with possible normalizing NT nutrients, anti-inflammatory substances, and stimulating afferent pathways.

PROCEDURE:

1. Correct all injuries first (injury recall technique, nociceptor stimulation-blocking technique, set point technique)
2. Test right and left Supraspinatus muscles:
    a. Weak in the clear
    b. Does not weaken to AI
    c. After rubbing supraspinatus (brain) Chapman's reflex for 2 seconds, ipsilateralsupraspinatus does not weaken to AI
3. TL to supraspinatus / brain CR with NT(s) – usually excitatory (e.g., GLU, ASP, occasionally dopamine or others) causes indicator muscle weakness
    a. Identify NT(s) that negate weakness (often GABA, serotonin, acetylcholine, dopamine, norepinephrine, or epinephrine
    b. Identify nutrient factors for synthesis of the strengthening NT (i.e., appropriate nutrient(s) will negate weakness)
    c. Identify autonomic factor that negates weakness
        i. Autonomic (sympathetic or parasympathetic) factors
            - Some organ needs more sympathetic (SYM) activity
                a. Focus eyes on a distant object negates weakness
                b. Retrude jaw negates weakness
            - Some organ needs more parasympathetic (PS) activity
                a. Focus eyes on a near object (e.g., nose) negates weakness
                b. Protrude jaw negates weakness
            - Determine which organ needs treatment by pinching (for SYM need) and rubbing (for PS need) visceral referred pain areas
            - Treat organ appropriately
                a. Pinching negates weakness – IRT to CR with offender
                b. Rubbing negates weakness – Rub CR (with offender)
    d. Identify afferent factor that negates weakness

i. Semicircular canal firing on opposite side of brain CR (structural or neurological fault in related quadrant)
ii. Lateral flexion to opposite side of brain CR (endocrine "centering the spine" effect)
iii. Immune system CR on side of brain CR (right side – thymus CR; left side – spleen CR)

4. TL to supraspinatus / brain CR with inflammatory (TH1) cytokine (e.g., tumor necrosis factor-alpha, interferon-gamma, interleukin-12, interleukin-6, etc.) causes indicator muscle weakness
    a. Identify cytokine(s) (usually anti-inflammatory) that negate weakness
    b. Identify nutrient factors that support the production of the strengthening cytokine (i.e., appropriate nutrient(s) will negate weakness)
    c. Identify autonomic factor that negates weakness
        i. Autonomic (sympathetic or parasympathetic) factors
            - Some organ needs more sympathetic (SYM) activity
                a. Focus eyes on a distant object negates weakness
                b. Retrude jaw negates weakness
            - Some organ needs more parasympathetic (PS) activity
                a. Focus eyes on a near object (e.g., nose) negates weakness
                b. Protrude jaw negates weakness
            - Determine which organ needs treatment by pinching (for SYM need) and rubbing (for PS need) visceral referred pain areas
            - Treat organ appropriately
                a. Pinching negates weakness – IRT to CR with offender
                b. Rubbing negates weakness – Rub CR (with offender)
    d. Identify afferent factor that negates weakness
        i. Semicircular canal firing on opposite side of brain CR
        ii. Lateral flexion to opposite side of brain CR (endocrine "centering the spine" effect)
        iii. Immune system CR on side of brain CR (right side – thymus CR; left side – spleen CR)
5. Treat and supplement as indicated

SUMMARY:

THREE FACTORS IN "BRAIN ON FIRE" PATIENTS

Note – always fix injuries (IRT, NSB, SP) first

1. Neurotransmitters
    - Excess Excitatory NTs
    - Deficient Inhibitory NTs
    - NT Nutritional Factors
2. Inflammation
    - Cytokines & Sources
    - Nutrients for Cytokine Modulation
3. Neurological stimulation
    - Excitation or Inhibition - What pathways?

- Autonomic (visceral) effects
- Semicircular canals
- Lateral flexion patterns (endocrine "centering the spine" effect)
- Immune (thymus or spleen)

CONCLUSIONS:
MMT provides a real-time somatic window on neurological and neurochemical function that allow the clinician to penetrate the uniqueness of each person's brain function. Imbalances in nutrition create or aggravate problems with NTs and inflammatory mediators. Each imbalance summates with other imbalances and is aggravated by excess or deficient sensory activity from muscles and joints, visceral dysfunction, and cortical functions. MMT assesses for the most appropriate therapy (ies) for each patient on each office visit in a manner the is unparalleled in the healing arts

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Applied Kinesiology Management of Acne Keloidalis Nuchae and Psuedofolliculitis - A Case Study

Tyran Mincey, D.C., DIBAK

ABSTRACT:
Objective is to share a case history of a case of acne keloidalis nuchae and psuedofolliculitis. Acne keloidalis nuchae is most commonly found in young adult men of African or, less commonly, Latino or Asian descent. It is very uncommon in women. In addition, acne keloidalis nuchae is very rarely seen in people prior to puberty or after middle age. This is also in barbers' circles attributed to "dirty" hair clippers. This condition or surface manifestation shares a strong correlation with digestive dysfunction and leaky gut. It is a condition which has remained an enigma to conventional medical practitioners solely depending on conventional laboratory testing, analysis, and standard medical examination procedures and the basic therapy of topical antibiotics. Applied kinesiology examination and procedures augment and clarify these cases and make diagnosis fruitful, allowing the clinician to take appropriate action and assist the skin and body in healing; thus avoiding disfigurement, embarrassment, and awkward and cowed social life due to the appearance of the scalp. Leaky gut, stomach and small intestine dysfunction should be ruled out in all patients presenting with this mystery and routine illness.

KEY INDEXING TERMS:
Chiropractic, Applied Kinesiology, Herbs, Manual Muscle Text, MMT, Nutrition, Physiological Phenomena, Functional Medicine, Leaky Gut, Hypochlorhydria, Small Instestine, Psuedofolliculitis, Acne Keloidalis Nuchae

INTRODUCTION:
Irritation and bumps on the nap of the neck are a most common in Black, Latino, and Asian cultures. These bumps are a cosmetic problem and create discomfort, scarring and socially make those inflicted less confident and more self-conscious. The problem is a major issue and the most commonly consulted healthcare provider is a dermatologist. Solutions offered rarely work leaving the patient to progress on to scarring and disfiguring keloids and scar tissue. The skin is a route of elimination as are the bowels, and kidneys. The skin also reflects immune reactions, allergic reactions that happen in the gut and acts as a barometer of internal processes albeit difficult to evaluate many times. Basic proof of this is we know clinically that well absorbed fatty acids help with skin texture and smoothness. Medically the most common treatment for this affliction is topical antibiotics or nothing. Only those trained to understand that functional illness precedes poor function and then leads to pathology actually look for causes of psuedofolliculitis. One such tie is the relationship between gut health and skin health. This condition, unaddressed, progresses to a small bump, then to a pustule which repeatedly scars, until it keloids and then the hair follicle dies. This continues full circle until disfiguring keloids take the place of hair on the scalp.

Jargon Relating to Psuedofolliculitis:
The nape of the neck is that area or junction between the occiput neck conincident skin covering the ligamentum nuchae and base of occiput. "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. Leaky Gut is literal conditions in which cell junctions are relaxed and partially digest protects penetrate and are attacked starting an immune reaction. "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 inserts 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 diagnositic palpatory line located bilaterally on the skull near the temporal and sphenoidal areas. The clinician palpates this line for nodules that correspond with muscle and possible organ imbalance.

Case Report:
A 25 year black male presented with a chief complaint of bumps on the scalp that progressed to exudative sores and were starting to scab and keloid. He mentioned that the condition was non responsive to medical therapy of any kind including antibiotics.

Using standard medical physical examination and abdominal examination no abnormalities were detected, except for a bilateral conditional inhibition of the rectus femoris, bilateral pectoralis major clavicular inhibition. As per Walther in Applied Kinesiology, Synopsis standard reflexes for an quadriceps muscles which relate to the small intestine were tested and in this case all were active, these were treated with hard digital pressure, or other standard methods. These included neurovascular, lymphatic, and the acupuncture meridian connector point, the patient was then put on Nutri-West's Hypo- D, Total Leaky Gut and complete omega 3 essentials one to three times per day of each and this strengthened the quadriceps on gustatory challenge. At the conclusion of the five visits the scalp had healed by about 90 percent with no further exudate.

DISCUSSION:
There are many wrong whys as to what causes this condition. Most are clearly not correct otherwise people would be healing. Barbers and medical professionals attribute this to "dirty" hair clippers; sadly the only therapy offered is topical antibiotics, injections, and corticosteroid therapy.

AK methods should be used to hone in on which part of the digestive system first, prior to more aggressive care being performed. Our observation is that the condition relates most commonly to stomach and small intestine leakage and associated immune response. Frank pathology had been completely ruled out. Part of all work-up should have included an evaluation by an applied kinesiologist or an appropriate referral to one, which will save thousands in unneeded lab testing.

CONCLUSION:
Digestive disturbances such as leaky gut and hypoacidity are involved in complex 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.

Acknowledgements are made to Nutri-West, Integrated Healthcare of Montclair LLC., and The ICAK.

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Dealing with Toxic Mercury

Harvey Lang, D.C.

ABSTRACT:
We present a simple yet very effective method to deal with mercury toxicity.

KEY INDEXING TERMS:
Mercury Toxicity, Myelin, Melatonin, Depression, Memory Loss, Amalgams

INTRODUCTION:
Mercury toxicity is a problem for a lot of people [1, 2]. We have been doing work with that for years because mercury toxicity sets up sort of an autoimmune disease thus lending itself to improvement after commonly used AK allergy desensitization techniques.

One primary cause of mercury exposure for most westerners is amalgams [3], but one can often see other sources causing mercury toxicity. For example populations of people living to a great extent on whale meat and blubber have been noted in the literature to have high levels of mercury found in their bodies, with correlated neurological findings.

The toxicity that we specifically address is when there is a threshold or "critical mass" reached of mercury and you start having problems with attacks from the immune system. What happens is the myelin itself becomes a target of the immune system after we reach that "critical mass" of mercury. So we merely desensitize them to the myelin. At the same time, there is a one hundred percent correlation of myelin sensitivity with melatonin sensitivity. Sensitivity to melatonin is the cause of SAD (Seasonal Affective Disorder), of which major symptom include depression and other psychological symptoms (usually worse in winter). One particular finding is noted if one tests the anterior tibialis muscle on one side and then repeats it on the other foot. Test one side and it will be strong and then you will test the other side and it will test weak. The muscle test will exhibit, very often, "cogwheel" rigidity, which shows that there is an upper motor neuron lesion involved. This is very rarely noted in most clinical settings except for in Parkinson's disease.

After finishing the desensitizing (to myelin or melatonin), the formally weak anterior tibialis muscle strengthens. Then do a mild detox of the patient in order to bring their mercury under "critical mass". We usually use a metal detoxing formula such as "Mercury Detox" from Tyler Labs (now called Integrative Therapeutics Inc.), one BID on an empty stomach (at least empty of competing amino acids). When there is no apparent source of mercury, we try the regimen for a month or two and that is usually sufficient. Those patients with amalgams receive the supplement on an ongoing basis. Patients' moods and/or ability to concentrate very often immediately get better. We check for memory dysfunction by checking a weak muscle (usually using a G2 muscle test). Testing with a memory improvement drug such as Aricept or phosphatidylserine results in strengthening of the muscle, and then we assume memory damage (not found in all cases). After we fix the myelin/melatonin response (sort of an allergy) the G2 or weak muscle will not test strong in the presence of Aricept or phosphatidylserine. Subjectively we monitor the progress of the patient as the memory improves over a period of months, even years. We also encourage the patient to exercise their memory and concentration with various modalities such as game playing (e.g. Scrabble, Chess, and Sudoku) or any memorizing exercises.

Myelin damage is often caused by exposure to mercury [1, 4]. This affects neurological and mental functioning. The situation can be improved by simple desensitization treatment as well as supplementation with metal chelating formulas.

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Fixing Allergy

Harvey Lang, D.C.

ABSTRACT:
Presented is a new technique for curing allergies.

KEY INDEXING TERMS:
Allergies, Laser, Antibodies

INTRODUCTION:
For many years I have been correcting allergies in patients, starting in about 1986 or 1987 to the present time [1, 2]. Earlier, I relied on my own techniques and then after a while, I used Michael Lebowitz's excellent techniques (using a red laser pointer on four different points), which I had found superior to my own. I modified his procedures: after fixing them in the "clear", then always retesting using blood or saliva and re-treating. I eliminated most of the points Dr. Lebowitz used, and I used the anterior fontanel, which I eventually applied to auto-immune diseases. I would fix problems in the "clear" and then each time repeat with blood or saliva afterwards. After the treatment, I would usually instruct the patient not to eat or come in contact with the offending substance as much as possible for up to three weeks. For example, if the patient was allergic to wheat and they consumed it before the three weeks were over, the three weeks being the maximum time that the antibodies remain in the blood, according to George Goodheart, the allergy would often return. Very often, besides regaining the symptoms, the brain would make another template and the body would start producing anti-bodies again, and we would be back to square one with the allergy.

We did the above for many years and now we have come to a new way of fixing allergies that does not cause this recidivist phenomenon and also eliminates the need to further check in the presence of the patient's blood or saliva. We use an acupuncture point governing vessel 16 or Du16 (Fengfu) [3, 4], which is located slightly under the external occipital protuberance (where the head and the neck meet). Using that point (with a brief red laser contact) will eliminate the reoccurrence of the allergy if the patient comes in contact with the allergen before the antibodies go away. Using the above mentioned point (Du16), the recidivism would not occur. Although, if they had a strong allergy to the substance, the patient may still get a reaction (that is, within the three weeks). Nonetheless, this technique takes some of the pressure off the patient to have to abstain from coming in contact with the offending substance. Unless it was a major allergy with major symptoms, I tell the patient they can immediately eat or come in contact with the substance. Over the past few years, I have implemented this technique and have had a much lower rate of the immediate reoccurrence of the allergy in the patient.

In order to test the patient for a suspected allergen, place the material or food on the filtrum, the little depression on the upper lip (sometimes spelled "philtrum"), then test a previously tested intact muscle. If the muscle weakens then we have a positive test for the presence of allergy (or at least the body's dissatisfaction or "dislike" of the substance).To correct merely shine the red laser (for less than one second) on Du16, as mentioned above. Retest to make sure that weak muscle is negated.

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GV-20 Evaluation and Primary Meridian Identification: An Important Tool in the Early Stages of Evaluation and Treatment

David Russ, D.C.

ABSTRACT:
A procedure is outlined for use in the early stages of patient assessment. In this procedure, the acupuncture point GV-20 and the Beginning and Ending points of acupuncture meridians are used to screen for switching, cranial-sacral primary respiratory faults, depletion, nutrient deficiency, and to give the practitioner an initial sense of the complexity, nature, and depth of the patient's problem. Meridians are conceptualized as representing physiological functions, and the GV-20 evaluation is a tool for identifying which physiological functions are primarily stressed in the patient. Findings from this evaluation are then correlated with common clinical presentations and possible avenues for treatment.

KEY INDEXING TERMS:
Meridian Therapy, Beginning and Ending Points, GV-20, Switching, Hypothalamus, Cranial Fault

INTRODUCTION:
Applied kinesiology practitioners have hundreds of tools for the assessment and treatment of patients, and dozens of models and protocols for the application of these tools. In the day-to-day challenge of clinical practice, it helps to have a protocol to follow, but not necessarily to follow too closely. Since each patient has a unique history and set of problems, one needs a clinical model that is flexible enough to accommodate each patient, yet robust enough to provide the practitioner with a clear pathway for decision-making in any circumstance. In this paper, I will endeavor to describe the initial steps in a protocol that provides just such a model.

This method provides an efficient and accurate read on a few key areas of clinical interest. It is a quick screen for problems with the cranial-sacral respiratory mechanism. It uncovers and corrects switching. Finally, it provides clues about how deep and complex the patient's problems are, and where to begin addressing them.

METHOD:
Assuming that all of the standard intake, history, and examination are completed, the practitioner uses posture, TS line, and observation to identify possible areas of muscle weakness. In this paper I will use the standard scale for grading muscle function:

5+ = muscle is able to produce normal power and provides full resistance against pressure and gravity, but does NOT change to a grade 4 or 3 after the ends of its spindle cells are approximated (autogenic inhibition) or the sedation point of its associated meridian is tapped. This is what some might call a "hypertonic" or an "overfacilitated" muscle.

5 = muscle is able to produce normal power and provides full resistance against pressure and gravity. Muscle responds to autogenic inhibition or sedation point tapping by changing to a grade 3 or 4.

4 = muscle is able to provide slightly less than normal power against resistance and gravity. The muscle is strong but it does not "lock."

3 = muscle can achieve active range of motion against gravity, but cannot provide power against resistance.

2 = muscle can only achieve range of motion if gravity is eliminated, i.e. the muscle is moved through a horizontal plane, or the weight of the limb is supported by the practitioner.

1 = muscle is capable of contracting, but cannot achieve any movement of the joint(s), even if gravity is eliminated.

0 = muscle is not capable of any contraction.

Traditionally, in Applied Kinesiology, a grade 5 muscle is a "strong" muscle. These are the most useful as indicator muscles.

A grade 3 or grade 4 muscle is what AK practitioners generally call "weak" muscles. These can also be used as indicator muscles.

The grade 5+ or "hypertonic" muscle often requires treatment, but is not useful as an indicator muscle.

Let us next describe the set of acupuncture points known as "Beginning and Ending" points or B/E points. Each meridian has one end on the extremity and another end on the trunk or face. The point at the end on the trunk or face is the B/E point for that meridian.

For example, the Bladder meridian has two ends: Bladder-1 at the medial corner of the orbit, and Bladder-67 at the lateral nail point of the 5th toe, Bladder-1 is the B/E point for the Bladder meridian because it is on the face.

The Liver meridian starts with Liver-1 on the great toe and ends with Liver-14 at the 6th intercostal space. Liver-14, being on the trunk, is the B/E point for the Liver.

Table 1 lists each meridian and the location of its B/E point.

The protocol begins once the practitioner has found:

a) at least one grade 5 muscle,

b) at least one grade 3 or 4 muscle, and

c) informed hypotheses about the patient's condition based on history and examination.

GV-20 Evaluation and Treatment:
GV-20 is the acupuncture point associated with that part of the brain which modulates all biochemical processes and responses to stress—the hypothalamus. This point is located on the sagittal suture, on the midpoint of the line connecting the apices of the auricles. If the body is under stress, GV-20 will show positive TL unless the body is too depleted or devitalized to mount a response to stress.

In other words, GV-20 will show positive TL in most patients. If GV-20 does not show positive TL, then either the patient is under zero stress or the patient's hypothalamus is unable to adequately respond to stress. The former is unlikely at the beginning of a treatment. The latter occurs about 20% of the time, and is the result of either cranial-sacral dysfunction or chronic fatigue and a depleted metabolic state.

Use a grade 5 muscle to evaluate GV-20 using therapy localization. It is not recommended that the provider perform the TL, or that the point is tapped or otherwise stimulated. The procedure works best with patient TL.

If GV-20 shows positive TL, it is called "GV-20 open." If GV-20 shows negative TL, it is called "GV-20 closed."

Whether GV-20 is open or closed, have the patient maintain TL to GV-20 and use their other hand to touch B/E points, one at a time. It does not matter whether the left or the right B/E point is therapy localized. One B/E point will negate the TL at GV-20. This B/E point corresponds to the meridian that is under the most physiologic stress at the time. This is called the "primary meridian."

To treat GV-20, whether "open" or "closed," simply stimulate GV-20 and B/E point for the primary meridian simultaneously. Stimulation of the points can be accomplished with rubbing, tapping, or simply holding. My preferred method is to hold GV-20 and the B/E points lightly until the B/E points begin to pulse, and let go when the pulse is strong and symmetrical. It usually takes less than a minute.

If the B/E points are on the face, I can hold GV-20 myself with one hand while holding the B/E points with the other. If this is not possible, I will ask the patient to hold GV-20 for me while I stimulate the B/E points. Much of the time, patients will relax during this treatment.

If GV-20 were closed, it will usually be open after this treatment. This does not mean that you have resolved the deeper issues; it means that the patient's neuroendocrine system is not in a state of deep adaptation and is amenable to evaluation and treatment. In other words, the patient is unswitched. Some patients return with GV-20 closed repeatedly. Others only need it opened once or twice and then it remains open until their next major stress or trauma.

DISCUSSION:
Dr. Christopher Astill-Smith developed this technique and has been teaching it for years. This finding is reproducible and has been tested across dozens of practices in many geographical locations. I believe it to be a significant advance in the efficiency of meridian evaluation and in the treatment of switching.

Ki-27 switching may be only one facet of the switching phenomenon. It may be that a patient can also have UB-1 switching, LI-20 switching, Sp-21 switching, and so on. In the early years of my practice, I was often frustrated by switched patients, finding that patients would be unswitched by Ki-27/umbilicus stimulation or cranial fault correction, and then quickly become switched again. Since adopting this method and Injury Recall and using them at the beginning of treatment, I have not had to deal with recurrent switching at all. Patients are easily unswitched and remain so.

The primary meridian is most often a yang meridian. In my experience, the Bladder meridian is the primary meridian nearly 50% of the time. The next most common meridian that I find primary is the gall bladder.

The bladder is the meridian that rules the spine, while the gall bladder is the meridian that rules the tendons. Liver and kidney are also common, as they relate to muscles and ligaments respectively, as well as toxicity. Any meridian can be primary, however, the bladder represents the plurality of cases.

According to Dr. Astill-Smith, bladder meridian problems correlate to a functional deficiency of serotonin. Given the prevalence of depression as well as digestive disturbances, it is no surprise that low serotonin is a major problem for our patients.

If GV-20 is closed, it is near certain that your patient's problems are deep-seated and chronic. Even in cases where the presentation appears simple, acute, and superficial such as a lumbar sprain, finding GV-20 closed is a strong indication that the presenting problem is the tip of the iceberg. Proceed in addressing the patient's concerns with the knowledge that there is more to the story. Further lines of inquiry can be opened after identifying the primary meridian.

Finding GV-20 closed indicates a likely involvement of the cranial-sacral mechanism. The usual suspects for causing cranial-sacral problems are implicated: upper cervical or TMJ problems, sacral respiratory faults, cranial faults, Injury Recall patterns (described by Dr. Wally Schmitt), and the adaptive patterns to trauma collectively known as switching.

Conversely, finding GV-20 open—while not a guarantee that the patient's problems are simple—is an indication that major lesions are probably not present and that the patient is probably not switched, at least not at that time.

After identifying the primary meridian and treating GV-20, you can also identify the secondary meridian, though this is less important. The secondary meridian's B/E point will negate the TL of the primary meridian's B/E point. The secondary meridian will be of opposite polarity to the primary meridian, i.e. if the primary meridian is a yang meridian, then the secondary meridian will be a yin meridian.

This makes logical sense—if the primary problem is a deficiency (which shows up as a problem in a yang meridian), then the adaptation is going to be excess somewhere else (which shows up in a yin meridian).

The identification of the primary meridian has significant implications for clinical decision-making and the selection of treatment modalities. Once the primary meridian is identified, the practitioner can target treatment to the physical and metabolic dimensions of the meridian.

For example, a patient with sciatica and Bladder meridian as primary would most likely have dysfunction (not necessarily inhibition) of the sacrospinalis muscle. He would also benefit from stimulation of the bladder points on the sacrum and lower extremity. He may well be dehydrated, and may have a depressed mood either contributing to or resulting from his sciatic pain.

On the other hand, a patient with sciatica and Gall Bladder meridian as primary would most likely have dysfunction of the knee on the affected side, would benefit from stimulation of the gall bladder points in the lower extremity, and may be dealing with an ileocecal valve problem stemming from fat digestion issues. This phenomenon is known as the ileal brake. When poorly digested fats are present in the small intestine, the IC valve closes to keep these fats in the small intestine so they can be digested.

Two patients with headaches may present the same, but if one has Lung meridian primary and the other has Small Intestine primary, two completely different evaluation and management pathways emerge for each of them. Lung meridian primary indicates need for improved oxygenation. Small Intestine indicates need for improved digestion and absorption, and often correlates with dysbiosis and food allergies.

I use neuromuscular therapy (NMT) in my practice, and spend considerable time in soft tissue work with patients. Briefly, NMT encompasses many soft tissue techniques aimed at mobilizing myofascia, restoring circulation and condition to the tissues. NMT practitioners use direct skin contact and often employ oil or other lubricant to help the practitioner's hand glide over the skin. It dovetails well with proprioceptor manipulation, NL point stimulation, origin/insertion work, fascial flush, strain/counterstrain, and acupuncture point treatment. Patients subjectively experience NMT as enjoyable and effective.

I focus treatment on the anatomical regions associated with the primary meridian, unless there are compelling reasons to do otherwise. These associated regions are the soft tissues and joints located along the anatomical course of the meridian itself, the muscles related to that meridian, the alarm (mu) and associated (shu) points of the meridian, and the NL points of the organ related to that meridian.

In terms of nutritional and metabolic therapies, identifying the primary meridian is of great value. For a fatigued patient with a primary lung meridian, one would focus on improving oxygenation, aerobic capacity, and evaluate glycolysis and Krebs cycle function. From a structural point of view, this patient would be evaluated for rib and diaphragmatic function as well as problems with the serratus and pectoralis minor muscles, for their role in the ventilatory mechanism.

A similarly fatigued patient with a primary kidney meridian would be suspected to have adrenal hormone disruption, and/or systemic toxicity, depending upon the history and other presenting symptoms. Structurally, this patient's mood and energy would benefit from neuromuscular

therapy aimed at the lower back and legs, and would be evaluated for subluxation at the upper lumbar and lower thoracic segments.

Identification of the secondary meridian provides further clarity in circumstances where the patient's symptoms do not seem to correlate with the primary meridian. For example, a patient with lower back pain may have the Spleen as primary meridian and Large Intestine as secondary. In this case, allergy or immune function may be the primary problem, with symptoms showing up in Large Intestine related structures. Dysfunction would probably be found in the quadratus lumborum, hamstrings, TFL, with subluxation of the hips, SI, or lower lumbar segments. Treatment directed at these structures would help the patient's symptoms, but would not solve the problem. Evaluation of immune function and allergies would be indicated and proper treatment would be undertaken. Since the Large Intestine was the secondary (adaptive) metabolic function, the patient's allergies would probably involve foods.

In my clinic, I would provide short-term treatment to the Large Intestine related structures while undertaking evaluation and treatment of the underlying immune/allergic issues.

Assuming that the readers are familiar with the muscle-meridian-organ associations and the anatomical locations of each meridian, Table 2 summarizes each primary meridian, its metabolic implications, and some possible considerations for further evaluation or treatment.

ACKNOWLEDGEMENTS:
Many thanks and great credit to Dr. Christopher Astill-Smith for his keen insights into the uses of GV-20 as well as his gift for explaining complex biochemical and meridian therapy concepts.

Readers unfamiliar with neuromuscular therapy (NMT) are directed to the many excellent works by Dr. Leon Chaitow available from Elsevier, and often published in the excellent peer-reviewed Journal of Bodywork and Movement Therapies.

Dr. Wally Schmitt has researched and written extensively about cortical and cerebellar adaptations to injury and the resultant inhibition of anterior motor neuron pools. He developed the Injury Recall Technique that I describe in this paper. The interested reader is referred to Dr. Schmitt's work.

Thanks to Dr. John Corneal for his help refining this paper.

Table 1: Beginning and Ending (B/E) Point locations

Meridian	**Location of B/E Points**
Lung	Lu-1 at coracoid process
Large Intestine	LI-20 at lateral corner of the nares
Stomach	St-1 on the edge of the orbit, directly inferior to the pupil with the eye in neutral
Spleen	Sp-21 mid-axillary line, 6th intercostal space
Heart	Ht-1 at the apex of the axilla, on the axillary pulse
Small Intestine	SI-19 in the depression directly anterior to the tragus of the ear
Bladder	UB-1 in the depression superior to the inner canthus of the eye
Kidney	Ki-27, at the junction of the sternum, clavicle, and first rib
Pericardium/Circulation Sex	Cx-1, 4th intercostal space at mid-clavicular line
Triple Warmer	TW-23 in the depression at the lateral end of the eyebrow
Gall Bladder	GB-1 at the lateral corner of the orbit
Liver	Lv-14 6th intercostal space at mid-clavicular line

Table 2

Meridian	**Metabolic function**	**Possible clinical correlation**	**Interventions to consider**
Lung	Oxygenation, respiration, aerobic capacity	Fatigue, headache, acidosis, asthma, acute respiratory infection.	Improve ventilation, aerobic exercise, support for glucose metabolism, immune support.
Large intestine	Elimination	IBS, fatigue, ileocecal valve syndrome, skin problems.	IC valve correction, test for dysbiosis, digestive support
Stomach	Digestion	Upper GI problems, food allergies.	Digestive enzymes, test for H. pylori, test for hypochlorhidria
Spleen	Immune, allergy, sugar handling	Allergies, anergic immune system, chronic infections, hyper/hypoglycemia	Allergy testing, immune support, blood sugar evaluation.
Heart	Circulation	Circulatory problems	Aerobic exercise, CoQ10 deficiency,
Small intestine	Absorption	Dysbiosis, malabsorption.	Test for dysbiosis (urinary organic acid test), food allergy/intoleran ce, pancreatic support.

Bladder	Hydration, elimination	Dehydration, toxicity, depression lower back pain	Mood support, mental/emotiona l techniques, water intake, toxic metals.
Kidney	Elimination	Dehydration, toxicity, migraine, fatigue, adrenal problems, lower back pain.	Detoxification and metabolic clearing, toxic metals, water intake.
Circulati on sex	Endocrine regulation	Adrenal or reproductive problems.	Adrenal stress, female or male hormone evaluation.
Triple warmer	Metabolic regulation	Thyroid problems, fatigue, trauma.	Thyroid antibodies, TSH, T3, T4, iodine, vitamin A, gluten intolerance. Trauma processing work.
Gall bladder	Fat digestion	Digestive problems, tendonitis, abdominal pain	Gall bladder imaging, bile salts, beet concentrate, vitamin A, essential fatty acids
Liver	Detoxification	Fatigue, toxicity, headache, tendon problems.	Detoxification support, evaluation of toxicity.

Hypercoagulation Disorders - A PAK Approach

Michael Lebowitz, D.C. and Noah Lebowitz

ABSTRACT:
Hypercoagulation is a condition that in extreme cases can lead to a deep vein thrombosis, pulmonary emboli, and stroke. In less severe cases it has shown to be associated with chronic fatigue, fibromyalgia, nutrient deficiency, etc. Using Professional Applied Kinesiology the authors have developed a technique to possibly check for a patient being in a hypercoagulation state. This allows us to help the patient decrease their chance of a serious circulatory incident, or resolve chronic health issues that haven't yet been resolved.

KEY INDEXING TERMS:
Hypercoagulation, Deep Vein Thrombosis, Thrombus, Stroke, Pulmonary Embolism, Chronic Fatigue

INTRODUCTION/BACKGROUND:
Hypercoagulation is a condition manifesting in increased fibrin in one's blood and as a result the individual is at an increased risk of developing a thrombus (blood clot). If a person goes too far into a hypercoagulative state they develop deep vein thrombosis (DVT) which can be broken up and lead to pulmonary embolisms (PE), a myocardial infarction (MI), or stroke.

According to research done by David Berg, in less severe cases hypercoagulation can lead to chronic fatigue, fibromyalgia, and osteonecrosis. [1]

Checking for hyper-coagulation has never been attempted before in Professional Applied Kinesiology (PAK), even though it is a leading cause of illness in the United States. It is estimated that 300,000-600,000 suffer from a DVT in the United States each year, and that 60,000-100,000 die from a DVT or PE each year. [2] Well known people such as Hilary Clinton, Mariano Rivera, and Serena Williams are several of many that have suffered recently from blood clots, leading to an increased public awareness.

Hypercoagulation can be caused by a myriad of issues including: infections, metal and chemical toxicity, immobility, surgery, supplemental estrogen, malignancy, genetics, or prolonged periods of time spent at very high elevation.

Research done by Dr. Pryzdial from the Centre for Blood Research shows how certain viruses, such as herpes simplex (HHV6, EBV) or cytomegalovirus (CMV) "express phosphatidylserine like procoagulant activity, capable of binding Xa and Va to form the prothrombinase complex." [3] David Berg went on to note that 70% of patients studied with Chronic Fatigue Syndrome as well as Multiple Sclerosis were infected with HHV6. [4] HHV6 is known to reside in endothelial cells, causing them to lose their ability to synthesize prostacyclin, and thus have a decreased ability to deter platelet adhesion. [5] Berg also mentions how the hypercoagulative state found in patients with chronic fatigue syndrome and fibromyalgia does not result in a thrombus, though is still problematic.

While a thrombus was not formed, fibrin deposition in blood vessels can lead to hypoxia, nutrient deficiency, and a plethora of other symptoms.
By screening ones patients for hypercoagulation and giving them supplementation and lifestyle changes, one could decrease the risk of the patient developing a DVT or PE. Also by thinning out one with "thick blood" it will allow the patient to more efficiently deliver oxygen and nutrients to all parts of the body, which may have currently obstructed pathways. By doing this one can help chronic patients with conditions such as chronic fatigue, fibromyalgia, nutrient deficiencies, etc.

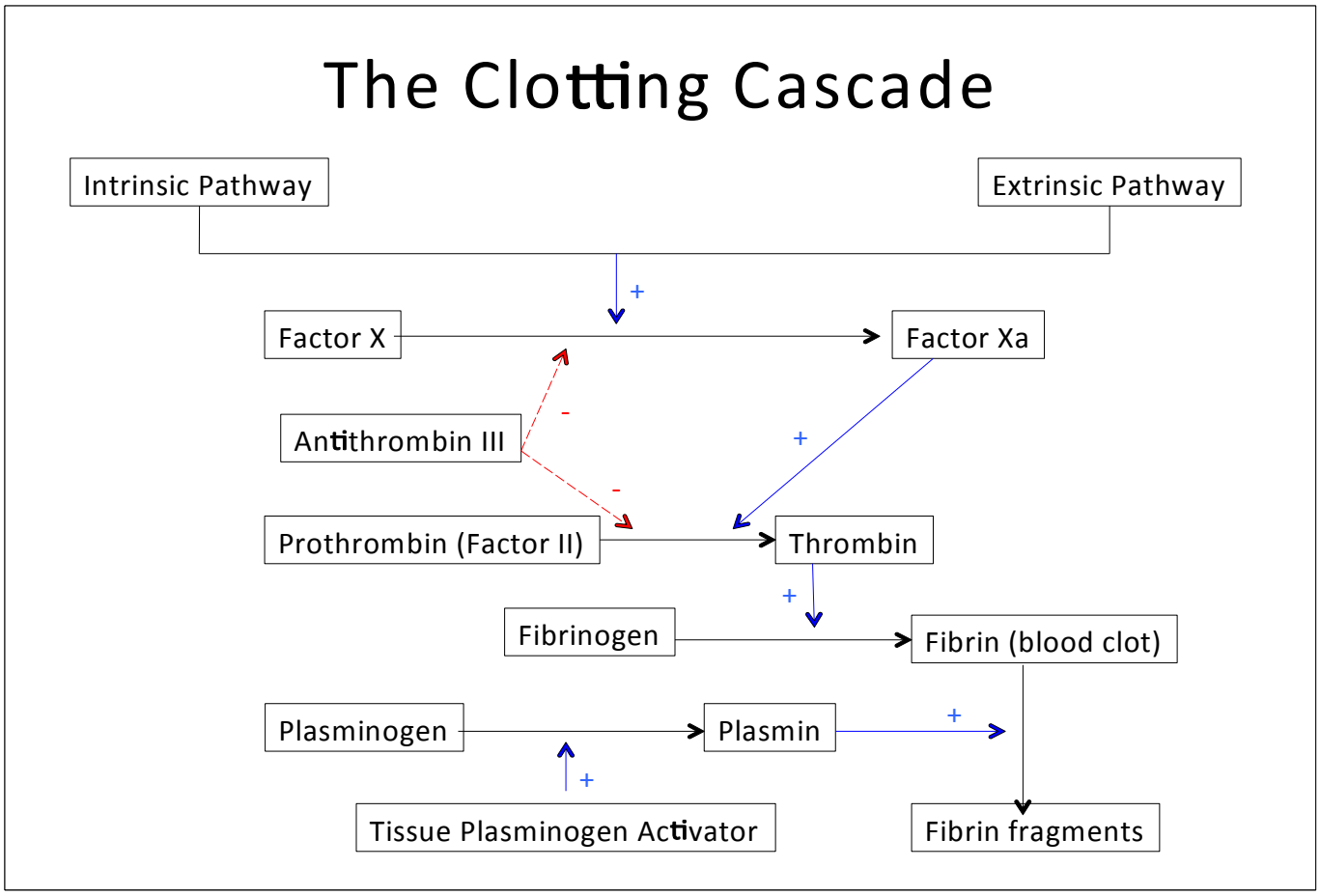
While the clotting pathway is quite complicated, we chose to focus on four main pro-coagulative factors and four main anti-coagulative factors.

Pro-coagulation Factors:

- Prothrombin/Coagulation Factor II
  -An inactive protein synthesized by the liver and released into the blood, which is then converted to active thrombin in the process of blood clotting.
- Thrombin
  -The active enzyme produced from Prothrombin, which acts to covert fibrinogen to fibrin.
- Fibrinogen
  -Another inactive clotting factor in blood plasma that is converted to fibrin. Produced by the liver and plasma cells, fibrinogen accounts for approximately 7% of blood plasma proteins.
- Fibrin
  -The final step in the clotting cascade, fibrin is insoluble, essential to blood clotting, and formed from fibrinogen by the action of thrombin.

Anti-coagulation Factors:

- Antithrombin III
  -An anti-coagulant, it blocks action of pro-clotting agents (factors XII, XI, IX, X and II).
- Plasminogen
  -The inactive enzyme precursor of plasmin.
- Plasmin
  -An enzyme present in blood that degrades many blood plasma proteins, most notably, fibrin clots. It activates collagenases, some mediators of the complement system, and weakens the wall of the Graafian follicle (leading to ovulation).
- Tissue Plasminogen Activator / tPA / PLAT
  -A protein involved in the breakdown of blood clots. As an enzyme, tPA catalyzes the conversion of plasminogen to plasmin. Because it works on the clotting system, tPA is used in clinical medicine to treat only embolic or thrombotic stroke. Use is contraindicated in hemorrhagic stroke and head trauma patients.



A person wants to have adequate pro-coagulation factors as well as anti-coagulation factors to be in proper balance for optimum body function. Just as being in a hypercoagulative state is dangerous, being in a hypo-coagulation state can be a serious health concern. If ones blood does not clot properly, a person can experience increased bruising, and the potential for excessive internal or external bleeding, such as someone suffering from hemophilia would experience.

When checking for adequate amounts of clotting factors in the blood via muscle testing they should neither inhibit a facilitated muscle, nor facilitate an inhibited muscle, unless something is abnormal, just as would occur in food or nutrient testing. Using PAK we can not only check for if the person has a coagulation issue, but also see if it is with clot production or clot breakdown.

The question may arise of what to do once such problems have been discovered. There are many natural substances that are known and have been used for centuries to thin the blood:

1. Ginkgo Biloba is one such which has been shown to be a potent antagonist of platelet activating factor, decreasing clot formation.
2. Ginger has been shown to have blood-thinning properties. [6] Current research out of the University of Sydney showed ginger to inhibit arachadonic acid induced platelet aggregation

via inhibition of the COX-1 gene. [7] New studies claim ginger to be a more potent anti-coagulative than aspirin.
3. Pomegranate Juice has been shown to also inhibit platelet aggregation, thus helping to deal with hyper-coagulation. [8]
4. Green Papaya has been shown to increase fibrinolysis and the breakdown of already formed clots. [9]
5. Bromelain, found in fresh pineapple, has been shown to decrease blood coagulation by several pathways. Bromelain acts by inhibiting the generation of bradykinin at the inflammatory site via depletion of the plasma kallikrein system. It also limits the formation of fibrin (clots) by reduction of clotting cascade intermediates. [10] Bromelain has also been shown in multiple studies to stimulate the conversion of plasminogen to plasmin, resulting in increased fibrinolysis (dissolution of clots/fibrin). This combination of effects can make it very useful in people with hypercoagulation tendencies. [11]
6. Nattokinase can be found in supplemental form or in natto as a food and has been shown to decrease coagulation in the blood by decreasing plasma levels of fibrinogen, as well as pro-coagulation factors VII and VIII. [12] It has also been shown to increase plasma levels of tPA, thus increasing fibrinolytic activity and lysis of thrombi. [13]
7. Shochu (Japan) / Soju (Korean) is known to increase urokinase-like plasminogen activator, leading to fibrinolysis, at the highest rate among all types of liquor; and is routinely in Japan for cardiac health. [14]

Chapman Reflexes have been used in PAK to help stimulate the function of organ systems of the body. The authors have found a Chapman-like reflex that seems to negate a positive test for hypercoagulation in a high percentage of cases. The reflex is bilaterally located on the anterolateral portion of the neck over the carotid artery where the baroreceptors are found at the carotid bifurcation (approximately C4).

PROCEDURE:
All patients with any of the conditions previously mentioned (stroke, DVT, fibromyalgia, miscarriage history, etc.) or a family history of any of these, should be automatically checked for a clotting disorder. For patients without these symptoms, a quick and effective pre-screen has been developed to see if further testing is necessary. As a potential "pre-screen" to see if a patient should be checked for a coagulation issue, the authors have noticed that when testing a facilitated muscle (i.e. pec major clavicular) you can squeeze the patients distal forearm firmly, decreasing circulation for approximately 10 seconds, and then re-test the patient while still squeezing. If the previously facilitated muscle is now inhibited, the patient should be checked for having a hyper-coagulation disorder as described below. This test doesn't correlate 100% with an abnormal test for hypercoagulation but appears to be positive in most of the cases (there can be false positives due to forearm injuries, etc.). If you suspect the disorder but the patient passes the "squeeze test", we would still recommend testing further as described next.

1. See if any of the following pro-coagulative vials inhibits a facilitated indicator muscle: Thrombin, Prothrombin Factor II, Fibrinogen, and Fibrin. If any of them weaken, it is a positive test.

2. See if any of the following anti-coagulative vials facilitate an inhibited muscle: Antithrombin III, Plasmin, Plasminogen, and Tissue Plasminogen Activator. If it does, it is a positive test.
3. See if a mixture of anti-coagulant encouraging herbs as previously mentioned negates the positive test.
4. If severe, also consider adding systemic enzymes like nattokinase and earthworm-derived enzymes to the products in step 3. If you do, warn the patient of potential bruising from taking too large of a dose.

5. Other helpful measures include:
    -Eating raw pineapple as a snack away from other foods
    -Drinking one ounce of Shochu or Shoju daily with or without food
6. These findings (positive tests in step 1 and/or 2) are much more common when family history includes, strokes, heart attacks, clots, embolisms, or miscarriages. They are also aggravated by taking estrogen, having an infection (chronic or acute), lack of exercise, dehydration, surgery, etc.
7. After identifying supplementation to negate the positive hypercoagulation reflex, see if light pressure on the carotid baroreceptors negates the positive test. If so apply light pressure rubbing over the spot for 10-20 seconds while the patient is exposed to the factors that showed positive. Retest the vials, and they should show up negative.
8. Recheck the patient in a month. If the tests are now negative see if the supplements still strengthen a weak indicator muscle. If they do, continue with supplementation. If not just advise the patient to continue pineapple, shochu, etc.
9. CoQ10 can increase coagulation and supplementation containing it should be discouraged in these type of patients.
10. If the patient is already on pharmaceutical anti-coagulants it is not advisable to supplement further as it can increase the risk of bleeding disorders. The authors though have seen many people on these medications that still fail the above PAK screening test and they feel are still at risk. If you are not licensed to prescribe it is difficult to make any recommendations in these cases.

The above procedure can be reversed checking a patient for hypo-coagulation.

1. See if any of the following pro-coagulative vials facilitate an inhibited indicator muscle: Thrombin, Prothrombin Factor II, Fibrinogen, and Fibrin. If any of them strengthen, it is a positive test.
2. See if any of the following anti-coagulative vials inhibit a facilitated indicator muscle: Antithrombin III, Plasmin, Plasminogen, and Tissue Plasminogen Activator. If it does, it is a positive test.

DISCUSSION:
While working with this technique for the past year we have found that most people with family histories of coagulation abnormalities, strokes, miscarriages, etc. will test positive on at least one of the above screening tests and often times many of them. Using the therapies outlined above most often lead to a return to normal testing within a month's time. While we cannot be positive what we

are accomplishing we think we are making a positive impact on returning the person to a normal state of coagulation and thus helping prevent potentially lethal events in their future health.

There are many lab tests that check for genetic tendencies to hypercoagulate and much controversy exists on interpretation, strategies, etc. The recommendations above come from the personal research of one of the above authors who almost died from massive pulmonary embolisms secondary to a West Nile Virus infection in 2011.

CONCLUSION:
Screening for hypercoagulation is a quick and easy test that may potentially be life saving for your patients. It is well worth the minute or two it takes and it may help also aid in resolution of certain unresolved symptoms in the chronic patient.

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Learning Disability Cranial Fault Complex

Paul Sprieser, D.C., DIBAK

ABSTRACT:
A series of two additional cranial faults that are found to accompany the original Learning Disability Cranial Fault (LD). These two faults seem to lock in the correction the original LD fault and make the correction last longer.

INTRODUCTION:
I had discovered the LD fault some 35 years ago when my son was about nine years old and was having trouble concentrating in school. The school wanted him tested, and it was discovered that he had a developmental delay, known today as attention deficit disorder or ADD. It took me a number of years to examine enough patients to be certain.

I had a valid finding and in 1984, I presented that paper on my finding the ICAK-U.S.A. Annual Meeting in Michigan and the Collected Papers of that year.[1] However, Carl Ferreri, D.C. also present his paper and a book "Breakthrough for Dyslexia and Learning Disabilities"[2], so my finding and observation did not get much notice.

Over the next 29 years I have made many serendipitous discoveries about the LD fault, which have led to seven research papers about its connection to memory, [3] neurotransmitters[4] and brain chemistry disorder and depression[5], ocular lock[6] and cross therapy localization patterns.[7] This has caused me to wonder why I can make this correction on patients who don't have learning disabilities and it will usually stay corrected for many months without coming back. But with the learning disability patients it would seem to return within a few weeks, and so I started looking for other cranial faults that might accompany this original LD fault. What I discovered about five years ago were two additional cranial faults that always appear when the LD fault is diagnosed.

DISCUSSION:
I discovered these two patterns by the tried and true method of empirical observation of trial and error using therapy localization to the skull and palate region. Every time I would discover the presence of the LD cranial fault I would also find the presence of these two faults. However, it was conjecture on my part that I believed that these two faults belonged and always accompanied the LD pattern.

Until two years ago, when I awoke one night with the idea of how to create the LD fault, so I started experimenting and currently I have done this more than 500 times. I will save the description of how to create a LD cranial fault for another paper and concentrate my efforts on these two new cranial faults, which I do not have any specific names for so I classify them under a broad term of Accompanying Cranial Faults (ACF).

Some might wonder why I would want to create this cranial fault. What I learned long ago from Dr. Goodheart was to always ask myself the question when I did not understand some of my observations, "Why Is That". Meaning why the LD fault returns in some in very short order, and in

others one correction can last for years. I had learned from my patients, who work with computer systems in IT departments, when many computer glitches occur, the best way to correct them is to find a way to create the glitch.

My original theory about learning disabilities is that the problem was caused by the improper transfer of information from the right and left side of the brain over the corpus callosum. I believed at that point the LD cranial fault related to standard switching and the region of the corpus callosum. However, in January, 2007 I was teaching a basic AK course, when a women chiropractor asked me to correct ocular-lock.

I had previously corrected switching and believed that it should not be there, because K27 and CV8 were negative. I asked her to Cross TL the K27 points and she weakened, I knew from my observations and research this associated to the LD fault. I asked the doctor to read a line of text in the standard manner from left to right and she weakened, positive for ocular-lock. I corrected the LD fault and rechecked cross K27 it was negative and asked her to read a paragraph from left to right and right to left, both were now negative. I wasn't expecting this to correct ocular-lock, but it did and this began my research and gathering of data till the present time.

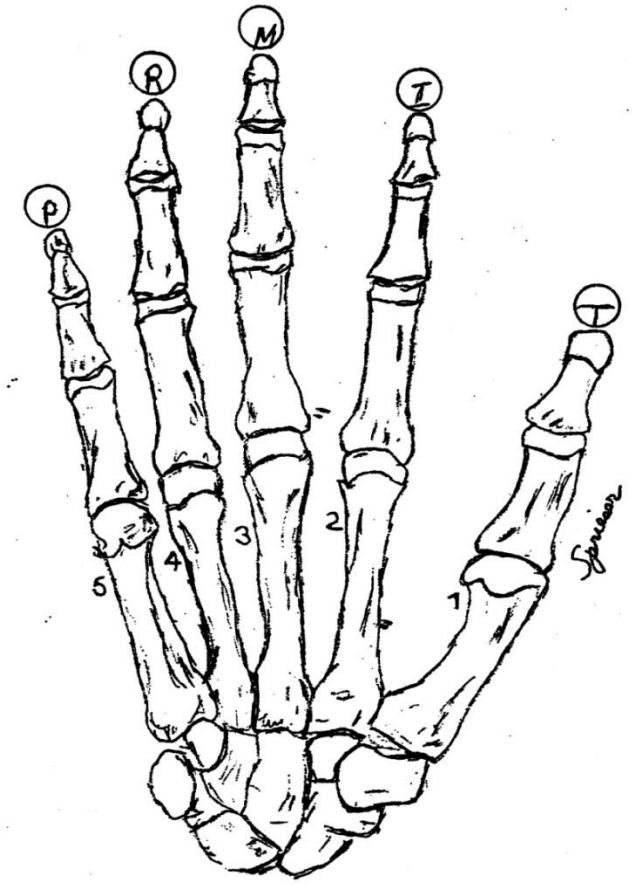
I have seen 470 new patients in this study and 2,100 regular over the five years and the cause of ocular-lock is the LD fault. Dr. Diamond in his book Behavioral Kinesiology (BK) gave credit to Dr. Goodheart for coining the phrase switching meaning body confusion. Switching he states, have a patient read a line of text forward, left to right and this will weaken of a indicator muscle in the clear meaning, some type of asymmetry between the two cerebral hemispheres has produced a "bizarre type of dyslexia", this is a paraphrase of page 40.[8] The bottom line is the LD fault is the cause and when corrected ocular-lock is gone. This changed my theory about this cranial fault from being connected to the corpus callosum to being connected to the brain stem.[9]

The brain stem is the posterior part of the brain, adjoining and structurally continuous with the spinal cord. It consists of medulla oblongata, pons and midbrain and is the main motor and sensory innervation of the face and neck via cranial nerves. Therefore all the cranial nerves that control movement of the eyes, Oculomotor-III, Trochlear-IV and Abducent-VI, originate in the brain stem. This seems to agree with both Goodheart's and Walther's explanations of eye movement trying to compensate certain structural distortions.[10,11] I also tested this theory out by nutritional challenge neurotransmitter receptors of the region of the corpus callosum and the brain stem. It would appear the LD cranial fault is associated with the brain stem.[12]

METHOD:

I used the process of therapy localization to both the cranium and the maxillary bone and palatine region. I used different finger combinations of one or both hand, and what I discovered was the following patterns. The original Learning Disability Fault was TL with both index fingers near the cruciate suture will cause a strong indicator muscle to weaken. Inspiration assist is necessary to correct the LD fault, but it does not negate the positive TL to the palate.

THERAPY LOCALIZATION FINGER POINT



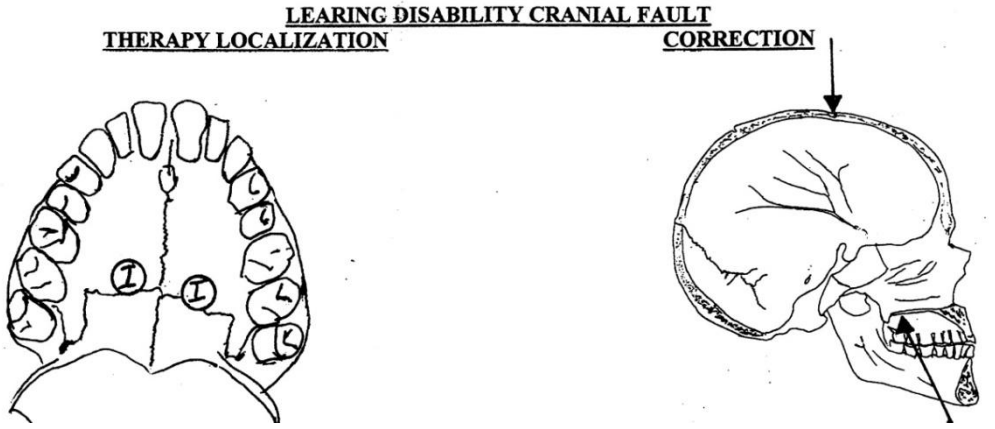
This diagram shows the finger being listed by the first letter of the name of the phalanges Thumb-(1)-T, Index-(2)-Index, Middle-(3)-M, Ring-(4)-R, and Pinkie-(5)-P.

Learning Disability Cranial Fault

Therapy Localization-Both index (I) fingers are placed on the roof of the mouth near cruciate suture, with the right index finger on the right and left index finger on the left.

Respiratory Challenge-While the patient TL the roof of the mouth with both index fingers inspiration will not negate the weakness of the indicator muscle however, inspiratory assist is necessary for the correction.

Correction-Doctor place the index finger of one hand in the center of the palate near the cruciate suture and the palm of his other hand over the bregma (GV-21), pressure is then applied during inspiration in an upward direction to the palate and downward direction from the apex of the skull near the bregma, this is repeated four or five times with inspiration.

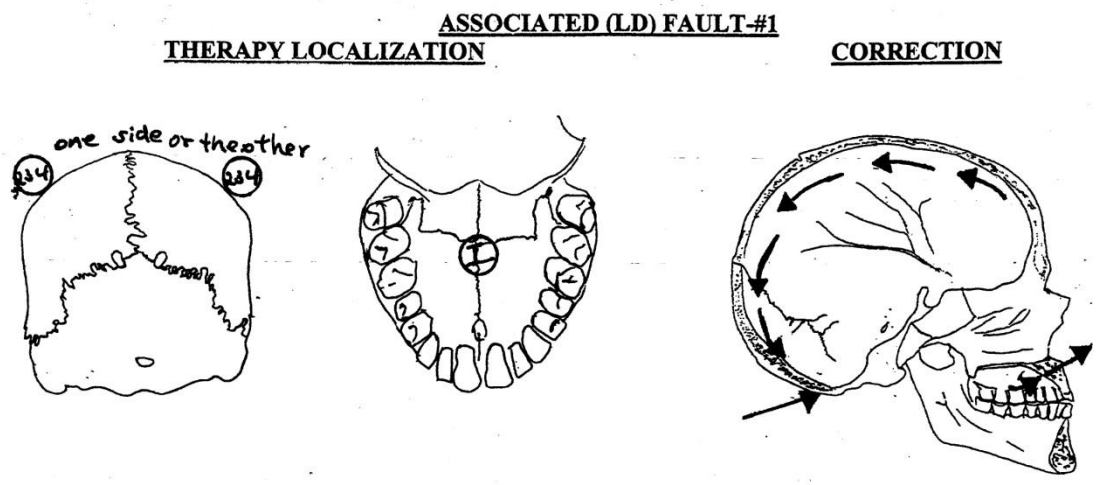


Associated (LD)-#1-Accompanying Cranial Fault (ACF)

Therapy Localization-One index finger (I) on the center of the roof of mouth near the cruciate suture, the other hand is placed on the upper parietal bone above the parietal ridge just behind the coronal suture. It will be positive to one side or the other, either right or left. The positive TL side is the side that is treated.

Respiratory Challenge-Inspiration will negate the positive TL pattern and correction in that phase of respiration.

Correction-The mastoid is pushed straight forward with the finger of one hand while that hand's palm is spread wide to contact from the edge of the frontal bone, parietal, and temporal bone with a torque action in a clockwise direction. This is repeated five times with three or four pounds of force.

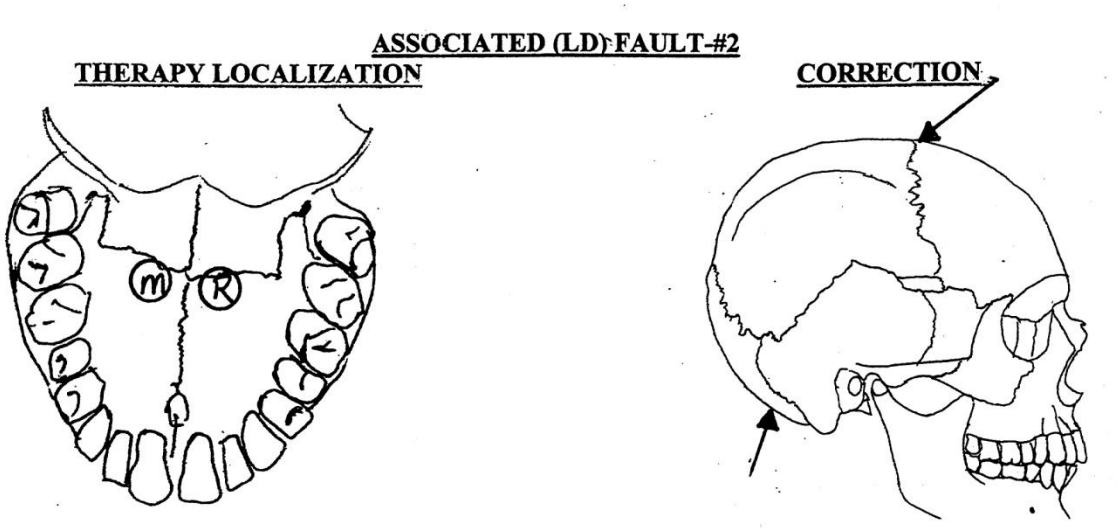


Associated (LD)-#2-Accompanying Cranial Fault (ACF)

Therapy Localization-The middle (M) and ring (R) finger of either hand is placed on the palate or roof of the mouth near the center by the cruciate suture. This will cause a strong indicator muscle to weaken.

Respiratory Challenge-Inspiration will negate the positive TL pattern and correction in that phase of respiration.

Correction-Pressure is applied at the bregma with the heel of the hand just behind the coronal suture and Saggital suture (GV-21) in the direction of external occipital protuberance (EOP). The other hand grasps with the fingertips the nuchal line at the posterior base of the skull in the midline below the (EOP), and applies upward lift in the direction of the bregma. The pressure is applied simultaneously with both hands during inspiration using five to seven pounds of force, this is repeated about five times.



CONCLUSION:
I have been collecting data on the original LD fault for the past 35 years and the additional accompanying cranial faults (ACF) for five years. My original belief was the LD fault was mainly associated with learning disability such as ADD, ADHD, and Dyslexia, etc. Over the years I have found that this fault associated with depression, bipolar disorders, and many types of developmental disorders. However, in the last few years I recognized that this fault shows up with any type of serious health issues, such as MS, Parkinson, and Cancer, just to mention a few. However at this point in time I am not certain what part it plays in the disease process. Since the LD fault seems to be associated with the brain stem, which controls the survival part of our nervous system, heart rate, blood pressure, body temperature, and the digestive system, etc.

I have presented the cranial fault in the basic AK course since 1985, as an unofficial cranial fault, since it does not appear in Walther's Synopsis. The feedback I have received from other doctors confirms my belief that the corrections of the LD fault make major improvements for learning disabilities especially dyslexia. Upledger in a study of grand school children with learning disabilities, observed a significant loss of cranial-sacral motion.[12]

Having found a way of creating the LD fault in patients who don't have it to start with, and recreating the fault after I have corrected it, in patients who presented with the fault these additional two ACF prevent the return the LD fault. This should also make the correction of the fault more long lasting.

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Management of Irritable Bowel Syndrome with Chiropractic and Applied Kinesiology Interventions – A Case Series

Paul Sprieser, D.C., DIBAK

ABSTRACT:
A practical method of intervention for diagnosis and treatment of chronic bowel disorder, with the use of Manual Muscle Testing (MMT) and Therapy Localization (TL) allows for accurate diagnosis that is non-invasive and cost effective.

The common feature of the IBS is the malfunction of the sphincter that divides the ilium portion of the small intestine from the cecum of the colon. The failure of the patency of this valve leads to changes in stool formation from (cylindrical cigar shaped) that is characteristic of normal bowel function. To the common symptomatic IBS of diarrhea or loose formation or constipated form of little hard marble appearing stool, and everything in between.

My intervention is in form of examination of the patient with the evaluation of patient's history, food diary, and Birmingham IBS symptom questionnaire. The patient is tested for common foods in their diet and any supplementation that they are taking and any prescription or over-the-counter drugs they are using. These are tested against general manual testing using standard indicator muscles, this is followed by specific testing using muscles that associated with the gastrointestinal track, such as tensor fascia lata (colon), quadriceps (small intestine).

INTRODUCTION:
Next to the common cold the most common complaint seen by physicians is the gastrointestinal illness known today as Irritable Bowel Syndrome (IBS),[1] it also is termed Spastic Colon and sometimes Mucus Colitis. By whatever name one applies, it amounts to 50% of all gastrointestinal illness. It has recurrent symptoms and causes minor disability for the patient who suffers with this condition.

This syndrome is described as a motility disorder involving both small and large intestine associated with various degrees of abdominal pain, constipation or diarrhea, and which may be a reaction to stress in the susceptible individual. It represents about half of all referrals to specialists or institutional care facilities. It has been estimated that between 10 to 20 percent of the general population experience this problem. At the current U.S. population of 315,118,737 million people it is reasonable to conclude that 30-60 million are suffering from IBS. However only about 15% seek treatment.[2, 3]

When the patient is examined there is no anatomical cause that can be found for these symptoms. However, there are ties to emotion, diet, drugs and hormonal shifts that contribute to this syndrome.

The circulation and longitudinal muscles of the small intestine and sigmoid colon are susceptible to motion abnormalities that may be initiated by ingestion of food to which the patient is sensitive or allergic. In addition, drugs that are used to treat other conditions that the patient may be suffering

from can have a parasympathomimetic effect and cause IBS.[4, 5]

It is essential to know the various components of this condition allowing for its differentiation from more serious gastrointestinal disorders such as colitis, Crohn's disease, tropical sprue and parasitic infections, which can have a more serious outcome if not diagnosed properly.[6,7] Symptoms which commonly accompany IBS include abdominal distress, erratic and frequent bowel action with varying stool consistencies. Other symptoms are bloating, flatulence, nausea, headaches, fatigue, lassitude, depression, anxiety, and difficulty with mental concentration (sometimes called "Brain Fog").[8, 9]

Intestinal symptoms can include spastic movement in the intestine triggered by eating, colonic pain, alternate periodic constipation or diarrhea, mucorrhea, and the sensation of incomplete evacuation after defecation.

There are two clinical types of IBS that are recognized. The first is the spastic colon type with variable bowel movements. The symptoms can often be triggered by eating, and pain of colonic origin most often present, which may be accompanied by fluctuations of diarrhea or constipation. Headaches and backache are usually present. The patient will have pain that may be colicky, occurring in bursts, or a continuous dull ache in the abdominal region.

The second type of IBS is painless diarrhea that is usually urgent and can be precipitous in nature. These symptoms often occur upon arising in the morning during or immediately after eating.

What is necessary is to rule out any current organic disease that may exist in the abdominal region. Common problems that can confuse the IBS diagnosis are lactose intolerance, diverticulitis, duodenal ulcers, and biliary tract disorders. These conditions may also coexist with the IBS condition.

Treatment is only supportive or palliative, and many times the patients' complaints are dismissed as being, "all in their heads." Mary Dvenwald points out that some patients are helped by serotonin reuptake inhibitors drugs, because most 95% of the body's serotonin is found in the gut and this influences the mesenteric nerve plexus.[10] However, it can worsen the symptoms affecting the patient, depending upon the type of IBS present.

Another IBS factor includes Ileocecal Valve Syndrome, in which bacteria may also play a role. Dr. Henry C. Line and others have found that many bacteria that normally reside just in the large intestine move into the small intestine, where they interfere with digestion and generate excess gas and produce symptoms. There is an immensely complex ecology of microorganisms found in the GI tract, with some 500 distinct species having been identified.[11, 12, 13, 14]

A recent report about microbes found in the human digestive system points out the presence of three distinct ecosystems. The microbes in the environments aid in food digestion and synthesize vitamins, using enzymes that human cells cannot manufacture. These three ecosystems are Enterotypes #1, #2 and #3, having different type of microbes present. For example, Enterotype #1 is made up of bacteroids, while in Enterotype #2 bacteroids are relatively rare---while genus Prevotella is common. These ecosystems are distinct, with type #1 producing more enzymes for making vitamin B7 (biotin), and type #2 more enzymes for B1 (thiamine).[15]

Each person shelters in to some 100 trillion microbes. For comparison the human body is made of

only 10 trillion cells. Twenty-four species were shown to occur commonly within, the GI tract with about eight species present about 100 percent of the time, including Staphylococcus aureus, Enterococcus faecalis, Escherichia coli, Bacteroides, Bifidobacterium bifidum, Lactobacillus acidophilus, Clostridium, and Spirochetes.[16]

The Ileocecal Valve Syndrome (ICV), represent the malfunction of the sphincter between the ileum portion of the small intestine and the cecum first part of the colon. The valve's purpose is to regulate the entrance of digested food in the colon and to prevent the reflux of colon content back into the small intestine. This allows for the bacterial spread to the small intestine. The colon contains a billion bacteria per milliliter of fluid, whereas small intestine ranges from a low of 0 to 1000 in the duodenum to 10,000 in the jejunum and 1,000,000 in the ileum. The stomach usually contains 0 to 1000, due to its working pH of 3.0. The time one arrives the jejunum, the pH is 6.0 to 7.0 due to the buffering action of pancreatic enzymes and bile. This pH is more suitable to bacteria growth and survival.[17]

Excessive gas causes abdominal pain, bloating and distention, the latter leading to the tightening of clothing which in turn, can mimic and amplify these symptoms. The gas originates from three sources: (1) swallowing known as (aerophagia), (2) the lumen, and (3) the blood.

If the ICV leaks, then it is possible for small intestine bacteria overgrowth (SIBO) to occur, because bacteria digest food and produce gas in this process. That is responsible for the abdominal symptoms the IBS patient experiences.[18]

The luminal gas is usually the result of the bacteria production of hydrogen (H_2), methane (CH_4), and carbon dioxide (CO_2). The hydrogen is produced by the consumption of fermentable materials, such as carbohydrates by the (SIBO). This can be confirmed by the Hydrogen Breath Test (HBT).[19] If the HBT is positive it can confirm the bacterial overgrowth in the small intestine, which usually does not occur because of absorption that takes place in the small intestine. Methane is produced endogenously by bacteria action on remains of the digested food in the large intestine. The carbon dioxide is from the bacterial action on bicarbonate and hydrogen ions that produce gastric hydrochloric acid and fatty acids.[20]

It is normal to have some flatulence from the action of bacterial with an average of 13 to 17 emissions (the upper limits of 21) in a 24-hour period. As an example, if the pH of the stomach were high (hypochlorhydria), as is commonly seen in allergies and in the aging population, one would expect improper breakdown in the initial phase of the stomach digestion. This is a critical factor in digestion and IBS. Today, with the use of antacids, acid blocking agents for heartburn and the presence of gastroesophageal reflux disease (GERD), the stomach pH may to be elevated to 5.0 or greater. In such instances, neither gastrin nor any cholecystokinin is released, leading to constipation.

Proper digestion requires hydrochloric acid (HCl) to breakdown proteins. If too little HCl is present, it will lead to putrefaction. The symptom of heartburn is often caused by this hypochlorhydria.[21]

The normal pH of the stomach is .8, essential for the breakdown of the amino acids, phenylalanine, tryptophan and tyrosine. Under such conditions, tryptophan is converted to serotonin, which can improve the IBS symptoms. Tyrosine is covered to epinephrine and norepinephrine as other neurotransmitters of dopamine, which can be involved with many digestive disturbances.[22]

The reason I undertook this investigation was the number of patients I have been treating over the past ten years has been showing a steady increase both in number and in severity of symptoms.

So I decided to use a more objective method of measure of my treatment methods and outcome evaluation of AK methods including nutrition, structural and emotional techniques for the treatment and stabilization of IBS. The eight cases that I have selected were chosen because they were current patients with a history of cooperation in following through making it easier to evaluate my results.

Treatment methods start with a general health questionnaire this is followed by Birmingham IBS Symptoms Questionnaire (BSQ). This will give me a base line to know the severity of the patient's condition.

I will ask the patient to use 0 to 10 grading to make the (BSQ) a more useful tool. This scale has been used by psychologists to objectify emotional symptoms such as fear and is known as (SUD) subjective unit of discomfort. Instead of using just the six gradations from all the time to none of the time the patient is asked to grade on each of the eleven questions using 0 to 10 grading, zero no symptoms to 10 the most severe symptoms.

This questionnaire is used before the start of each visit for the first four visits usually on a once a week visit. As symptoms improve the frequency will be reduced to one visit every two weeks for the next two months, then once a month for another four months. At this point six months should have passed. The (BSQ) questionnaire will be continued to be used to monitor the patient once a month even if they have stop maintenance care for an additional year.

This method gives me a way to evaluate how successful my protocol is and to evaluate the chiropractic method for structural approach, the chemical methods of nutrition, and finally the emotional methods of TFT (Though field Therapy) and (NET) Neuro Emotional Technique.

Treatment Protocol

After taking a careful case history of the patient the attending doctor should rule out any serious intestinal disorders that have similar symptoms to IBS. Some examples include such inflammatory bowel diseases as Crohn's disease, ulcerative colitis and parasitic infections. Once these other conditions have been eliminated as possibilities, then a symptom questionnaire, such as the Birmingham IBS Symptom Questionnaire (FIGURE 1) can be used to quantify the patient's subjective and objective symptoms.[23]

Information should contain the onset and duration of the patient's complaints, as well as what diagnostic testing that has been done including blood work. In the treatment program for IBS, the patient should monitor daily habits, when the symptoms occur, and identify factor that worsen patient's symptoms, such as food intolerance and stress.[24]

As far as food intolerances are concerned, keeping a food diary will help track down the offending agents. Common foods that can cause some of the symptoms of gas and cramping are legumes (beans) and cruciferous vegetables, such as cabbage, broccoli, cauliflower and brussels sprouts. Other food known to cause problems are celery, onions, carrots, raisins, bananas, apricots, prunes, sprouts and wheat.[25, 26]

BIRMINGHAM IBS SYMPTOM QUESTIONNAIRE

The following questions ask you about your abdominal and bowel symptoms. When we use the word abdomen we mean belly/tummy. Some of the questions ask about passing a stool. By this we mean going to the toilet for a reason other than to urinate (pass water). All of these questions refer to the last 4 weeks.
Please tick one box for each statement.

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
1. During the last 4 weeks, how often have you had discomfort or pain in your abdomen?						
2. How often have you been troubled with loose, mushy or watery bowel motions during the last 4 weeks?						
3. How often during the last 4 weeks have you been troubled with diarrhoea?						
4. During the last 4 weeks how often have you been troubled by hard bowel motions?						
5. During the last 4 weeks how often have you felt the need to strain to pass a motion (stool)?						
6. During the last 4 weeks how often have you been troubled by constipation?						
7. During the last 4 weeks how often did you experience pain or discomfort in your abdomen after eating?						
8. How often has you abdominal pain prevented you from sleeping, or woken you during the night during the last 4 weeks?						
9. During the last 4 weeks how often have you leaked or soiled yourself?						
10. How often during the last 4 weeks have you suffered from a feeling of urgency (feeling that you must immediately rush to the toilet to pass a stool)?						
11. How often have you passed mucus or slime in your stools over the last 4 weeks?						

Figure 1

Requests for permission to utilise the Birmingham IBS symptom questionnaire should be sent to one of the following:
Andrea Roalfe/Lesley Roberts/Sue Wilson, Department of Primary Care and General Practice, University of Birmingham, Edgbaston, Birmingham, B15 2TT, UK

Food testing for allergic or sensitivities can be done through skin reactions, which are IgE-E mediated, or blood tested with RAST (radioallergosorbent test).[27] A new and more accurate method is the Cytometric assay, which quantifies basophils after challenging with food antigens. This particular assay has been shown to be more accurate for food hypersensitivity (FH), with an 86% sensitivity level, 88% specificity and 87% accuracy level.[28]

Serum immunoglobins testing, (RAST) for IgE and IgG has been shown too correlated to manual muscle testing at 90.5%. This will allow for a simple method to detect the offending agents and using an elimination diet and food rotation.[28] The use of Nambudripad Allergy Elimination Technique (NAET) can desensitize the patient and eliminate the IBS symptoms if they are allergy related. A recent report by Kolata brings this discussion of food allergies into full prospective.[30, 31]

One must understand that there are commonalties found in patients with allergies such as hypochlorhydria, function hypoadrenia, and a structural cranial fault of the Temporal Bulge. These can be managed with nutritional supplementation of Betaine HC1 for hypochlorhydria, together with adrenal support with raw adrenal tissue, choline, vitamins E and C, tyrosine. The Temporal Bulge can be corrected with the use of cranial techniques.[32]

Bloating and gassiness can be treated by improving digestion with Betaine HCl and pancreatic enzymes, and restoring the normal flora growth of the small and large intestine with probiotics (products that contain acidophilus and other beneficial bacteria).[32]

The constipation type of IBS can also be helped with proper water and fiber being added to diet, while the diarrhea type is managed by dietary removal of irritants. Symptoms of constipation form of IBS have been relieved with S.S.R.I. drugs, including St. John's Wart. Helping bowel hypermotility is the use of peppermint oil, shown to block the flow of calcium ions into the muscle of the GI tract and thereby reducing the muscle contractions that can cause cramping.[34, 35, 36] Products which contain bile salts have also proven to be effective.[37, 38]

One should not forget the emotional side of this problem. This has been proposed to be managed by the applications of NET (Neuro Emotional Technique) or TFT (Though Field Therapy). Regular consulting with a trained professional will also be helpful in correction of this condition and it emotional components.[39]

Thought Field Therapy has been shown to have a profound effect on the autonomic nervous system and can greatly enhance the correction of the symptomatology of IBS.[40] Other cranial factors that apply to this condition are the Sphenobasilar fault (because of its relationship to hypoadrenia)[41] and what was previously known as the Learning Disability Cranial fault, related to serotonin and other neurotransmitters. Correction of these cranial faults should help to stabilize patient's condition.[42]

Testing can be specifically done by means of manual muscle testing (MMT) to access what are suspected to be associated organ/muscle relationships (TFL and Hamstrings-colon, Quadriceps-small intestine, PMC-stomach). These relationships can be used to see what supportive method would be the most effective in the patient treatment plan, whether that be a chemical approach with nutritional products, an emotional intervention with TFT treatment points, or the structural consideration with the five factors of the IVF.[43,44]

RESULTS:

TABLE 2

Outlines the diagnosis and results of eight patients with IBS who have been treated during the past 18 months. The cohort comprises five females and three males, aged 35-70. Shown is an overview of common patterns in applied kinesiology that are found in the patient when the IBS symptoms are present.

Applied Kinesiology Examination Findings in the IBS Patient

name	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***
PD'A	Open	Left	a, b, c	K, Cx	Cat. #1	C1, T12 Sac.	TMJ	L5, 4, C5, 2	SB L/D TB	HH DF	TF L,P CP,Q
KK	Open	Left	a, b, c,	K, Liv	Cat. #1	C1, T11 Sac.	TMJ	L5, 3,T 4C5	SB L/D TB	HH DF	TF L,P CGM, H
SM	Open	Left	a, b, c	Liv, Cx	Cat. #1	C1, T11 Sac.	TMJ	L5, 3,T 7C5 ,3	SB L/D TB	HH DF	TF L,P CP, GM
CR	Open	Left	a, b, c,	K, Cx	Cat. #1	C1, T12 Sac.	TMJ	L5, T12 C5	SB L/D TB	HH DF	TF L,P CGM, H,P
JV	Open	Left	a, b, c	K, Cx	Cat. #1	C1, T11 Sac.	TMJ	L5, 3,T 6C5 ,2	SB L/D TB	HH DF	TF L,P CP, Q
JS	Open	Left	a, b, c,	K, Cx	Cat. #1	C2, T11 Sac.	TMJ	L5, T11 T5, C5	SB L/D TB	HH DF	TF L,P CGM,P ,H, Q
LH	Open	Left	a, b, c,	K, Cx	Cat. #1	C1, T11 Sac.	TMJ	L5, T12 ,9,C 5,6	SB L/D TB	HH DF	TF L,P CP, Q,H
VVB	Open	Left	a, b, c,	Liv, Cx	Cat. #1	C1, T12 Sac.	TMJ	L5, T8 C5, 2	SB L/D TB	HH DF	TF L,P CGM H

1. ***ICV***
2. ***Yaw #2***
3. ***a-Switching-K27, b-Cross K27, c-Lateral Atlas, d-Ionic***
4. ***Acupuncture Meridian***
5. ***Pelvic Categories***
6. ***Fixations-Showed associated muscle weakness***
7. ***TMJ***
8. ***Subluxations***
9. ***Cranial Faults-Sphenobasilar (SB), L/D, Temporal Bulge (TB)***
10. ***Hiatal Hernia (HH), Diaphragm Fixation (DF)***
11. ***Muscle Weakness-TFL, Gluteus Med. (GM), Piriformis (P), Quadriceps (Q), Hamstring (H), Pectoralis Clavicular (PC)***

Other factors were food allergies and food sensitivities measured by RAST, ELISA/ACT, and the more traditional skin scratch testing. Also involved were MMT and insalivation of the suspected food using both standard indicator muscles such as the Gluteus Medius, PMS and PMC, and then specific testing against the TFL and Hamstring for the colon and Quadriceps for the small intestine. Seven of the patients who underwent food allergy testing, displayed the following food responses both in blood and MMT to corn, wheat, soy, milk, and some to brewer's yeast, the latter suggesting an over-growth of yeast in the patient's digestive tract.

All these patients indicated predisposing factors of life stress with poor coping skills, suffering with what is known as General Anxiety Disorder (GAD).[44] This has a strong effect on the "brain-gut axis", which can create visceral stimulation causing loose bowel movements and also frequent bowel movements.[46] The IBS patient appear to have emotion modulation of neural responses to visceral stimuli, and possibly reflecting the neural basis for the altered gut reaction.[47,48,49] By using the techniques of Thought Field Therapy (TFT), also known as Energy Psychology, one can teach the patient simple coping skills that they can apply on a daily basis to control GAD.

The outcomes for all eight patients were from complete recovery in five (no relapse for at least a year) and great improvement with only one exacerbation in six months for the remaining three patients.

Explanation of AK Methodology

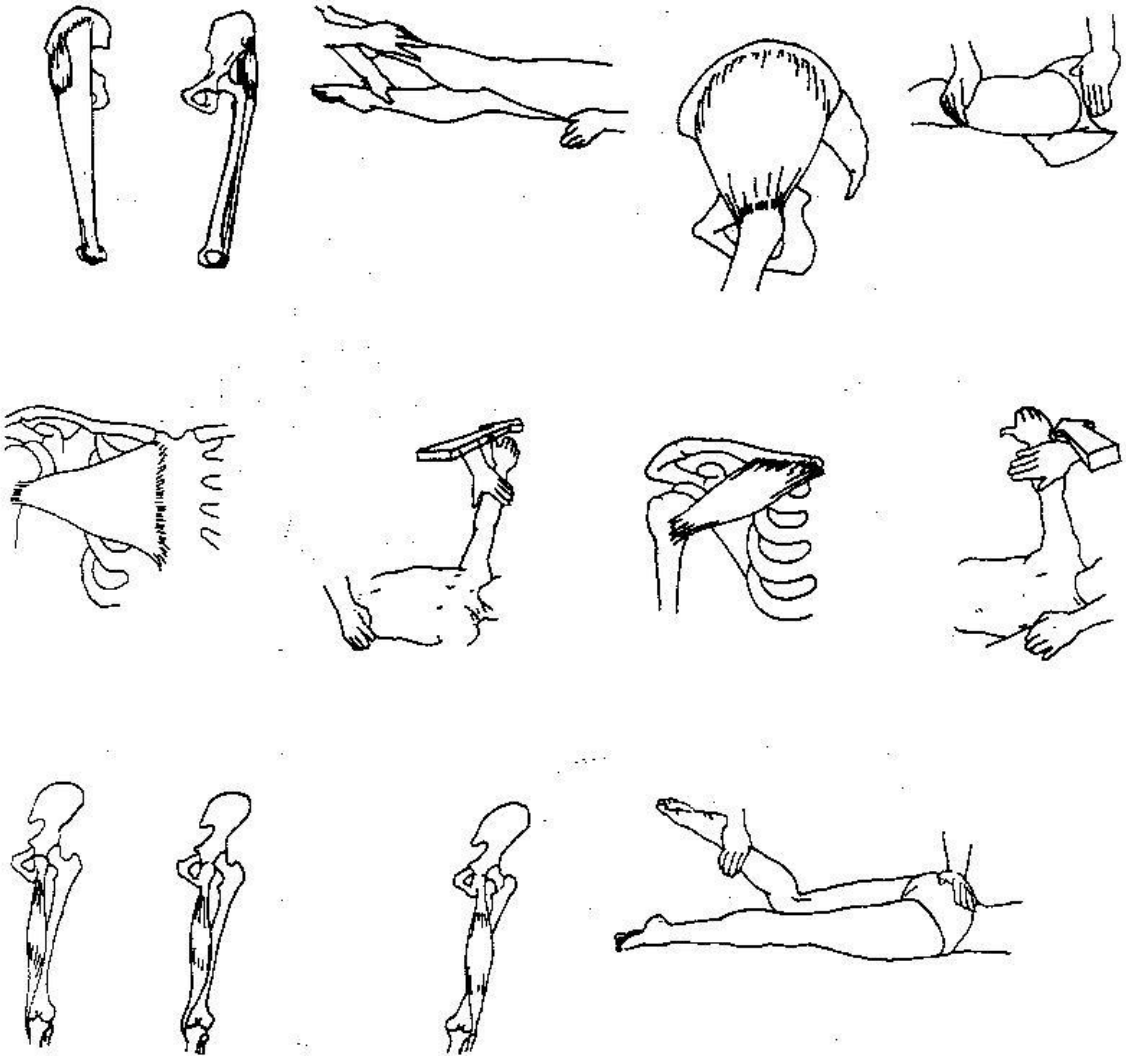
This paper is meant to be informative making it necessary to describe some AK methods and terminology for doctors who may not be familiar with this system of diagnosis-treatment. I will start with a brief explanation of MMT and how it is used as a diagnostic tool followed by Therapy Localization (TL).

The use of manual muscle testing has been used in medical practice and adjunctive services for over 100 years. The way it has been implemented by Dr. Goodheart as an evaluative tool became what is known as Applied Kinesiology.

MMT is being use as a diagnostic system which is divided in to two parts. First part can be described as quantitative, meaning that the overall strength is being measured in pounds or kilograms. Second part may be described as qualitative, which measure strength in the ability of the tested muscle to maintain the stability of the joint that the muscle activates against a standard measure of force

applied by the testing doctor. The first is measured in overall strength that can be charted and reported in numerical degrees. The second is qualitative and only measures the muscle as weak or strong. In AK only a strong muscle will be used evaluation a patient condition.

In AK, standardization of MMT is done with specific muscle groups to diagnose and form a treatment plan. In the supine position two hip abductor are used those are the gluteus medius and tensor fascia lata this allow the patient to therapy localized area being examined with their hands. In the upper extremities the chest muscles of pectoralis sternal or clavicular divisions are used. In the prone position (patient face down) the hamstring is the muscle of choice. However, any strong muscle can be used as a test or indicator muscle. The five that I just named are good standard muscles, which allow for easy isolation, good reliability both individual or inter examiner.



These Illustrations are by permission of David S. Walther, DC-Systems DC, Applied Kinesiology Teaching Manual, Module #1-Session #1, 1984. Starting top left: TFL page 30, Gluteus Med. page 31, PMS page 22, PMC page 23, and Hamstring page 24-25.

Therapy Localization was first observed by Goodheart in 1974 what he noted was if a patient touched an area of dysfunction, the results of a manual muscle test would be changed. A strong indicator muscle would weaken when the patient touch the area of dysfunction indicating where the dysfunction was located but not what the problem is. In
the case of a muscle that is weak when the patient touches the area that is responsible that muscle will strengthen. The exact reason for the phenomena is not well understood, however a study conducted at New York Chiropractic College in 1989 and published in The International Journal of Neuroscience. This study demonstrated the use of evoked potential electroencephalogram (EEG) study show a full millisecond change in signal up when a muscle strengthen and drop when it weakened. The examiner reading the EEG could predict the outcome of a strong or weak response without seeing the examiner testing.

ICV syndrome (ICVS) can be examined for by TL to McBurney's point in the lower right abdominal quadrant. The exact location of this point can be described, if a line is drawn from the umbilicus diagonally to the anterior superior spine of ileum, the mid-point is where this is located. Most of us are aware of this as a diagnostic point for rebound tenderness when the appendix inflammation is present. In the case of ICVS the patient TL to McBurney's point which will cause a strong muscle to weaken. Then a challenge of a pressure over this point pulling the abdominal tissue up diagonally toward the left shoulder will negate the muscle weakness indicating an open or leaky ICV. If pressure is applied down and outwards towards the hip joint and the weak muscle strengthens the ICV is spastic and will not open till sufficient pressure forces it to open.

<u>Anatomy of the ICV & McBurney's Point</u>

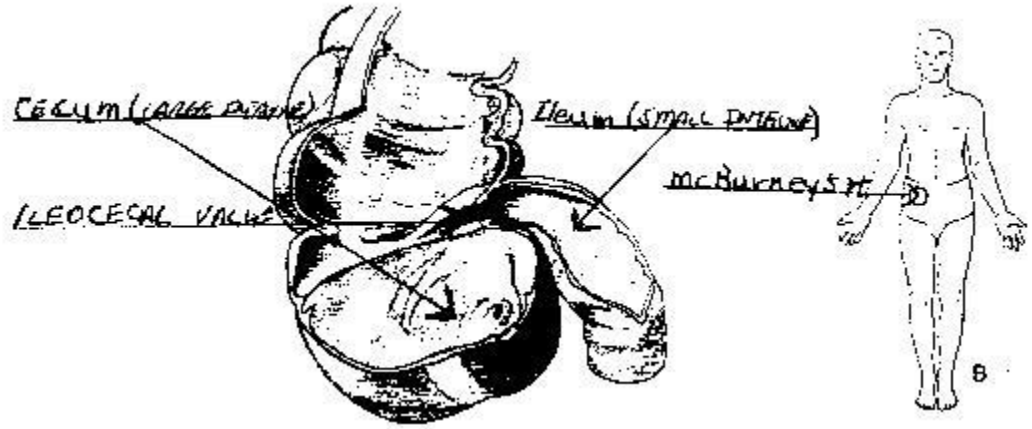
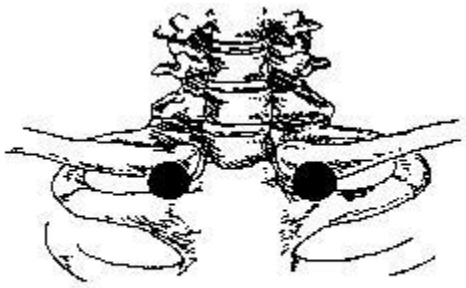


Illustration is by permission of David S. Walther, DC, Applied Kinesiology Synopsis-2nd Edition, ICAK-U.S.A. 2000

This intestinal malfunction is extremely common and can be found in about 75% of the general population. However this a key component of IBS patient, with the open variety being the most common in nine out of ten cases and associated with loose and frequent bowel movements. Spastic variety is most often associated with the constipation type and may have a lot of bowel tenderness that accompany this type.

The next AK finding to be examined is neurological disorganization or switching and it is universal

in the IBS patient it present can confuse MMT information and diagnosis. It is diagnosed by the patient TL to the K27 acupuncture points located at the junction of the clavicle with the sternum and first rib. The patient touches these points with their fingertips right hand on the right K27 and left hand on the left K27. It will be positive and cause a strong indicator muscle TFL to weaken. Its cause is usually the modular distortion referred to as Yaw #2 in over 95% of patients examined and when this pattern is correct the switching pattern is corrected.



5—6. Location of Kidney 27 (KJ 27).

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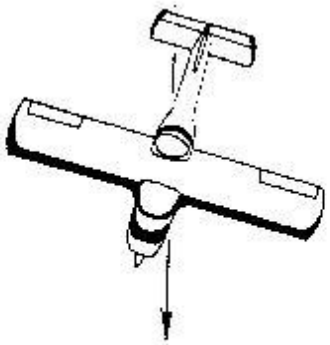
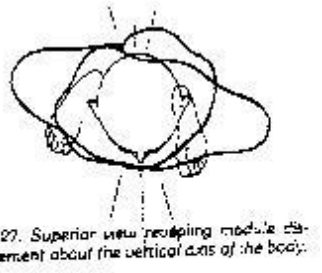
Since the body is composed of modules the skeletal distortions are referred to aeronautical or nautical terms as Pitch-Roll-Yaw-Tilt Technique (PRYT). Since the body is composed of modules and these are divided into head, neck shoulder girdle, thorax, pelvis and arms and legs. PRYT-Technique of AK helps to find subluxations and muscle dysfunction that cause inappropriate communication between the modules. These modular distortions cause chronic pull on the spinal dural insertions from the base of skull and upper cervical spine, down through the thoracic, lumbar spine and into the sacral canal with final attachment at the coccyx by with of the filum terminale. This constant irritation will cause proprioceptors to over fire and eventually fatigue. This feedback into the brain center that receive this information and will eventually cause the phenomena knows as switching.

Yaw#2 Distortion Pattern



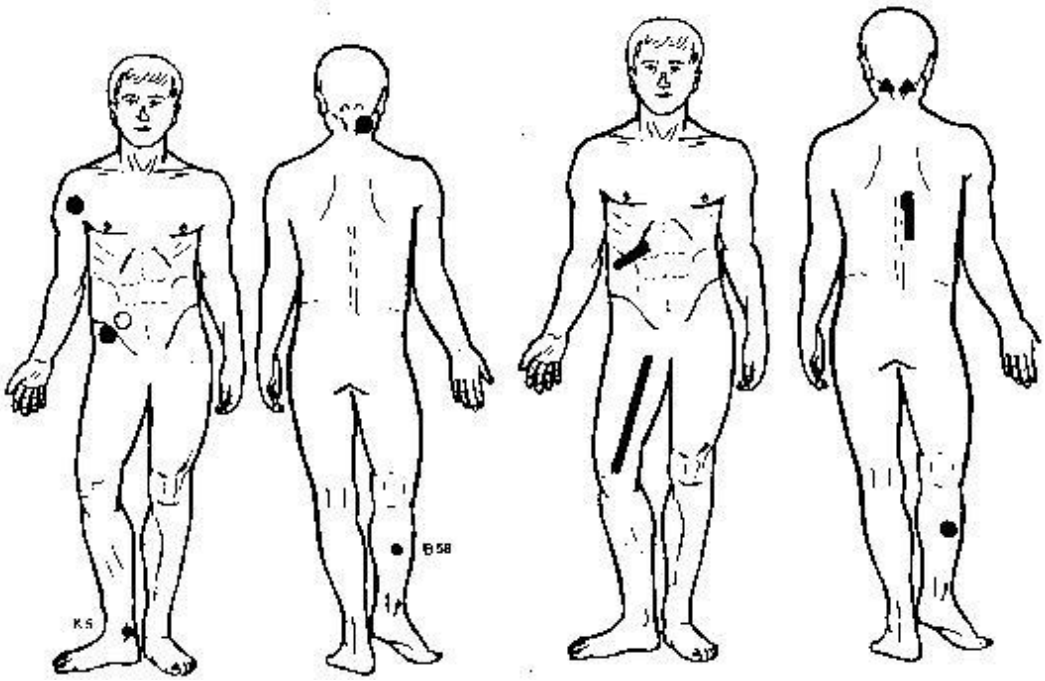
11—26. The arrow indicates the direction of flight. The airplane is yawed to the right.



11—27. Superior view revealing module displacement about the vertical axis of the body.

AK Treatment of ICVS-Open & Closed

Open **Closed**



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The Advanced Approach in Chiropractic, ICAK-U.S.A., 1976

The ICV malfunction is the constant in the IBS patient's symptom complex and if you can stabilize it by treating these reflex regions along with nutritional support then you should have at least 75% to 80% chance of getting this condition corrected. The areas marked with the black circles and straight lines are Neurolymphatic Reflex (NL), also known as Chapman's Reflex, which would increase lymphatic drainage in a specific organ. These points when contacted when the ICV malfunction is

present will cause a strong indicator muscle to weaken. The treatment of the NL point is done with a firm circular rubbing action with the volar surface of the finger tips. These points are usually quite tender on the anterior surface and can easily be felt as a doughy mass just under the skin about the size of a grape. For the open ICV the symbol ○ is a Neurovascular Reflex NV discovered by Terence Bennett, D.C. and influence the vascularity of different organs and structures. The NV are stimulated with a light tug pressure over the reflex point and held till a pulsation is felt. You may have to change the vector of tug till the pulse is felt. Both the NV and NL are treated for about 15 seconds under most circumstances.

The other treatment points are Acupuncture points (AMC) Kidney (K5) and Bladder (B58) for open and just B58 for the closed. You might want to warn your patient that the B58 point is usually extremely tender to pressure. These AMC points can be stimulated with firm pressure about eight pounds or tapping with your finger or using a piezoelectric electric simulation device.

Treatment Point Descriptions:
Open ICV-NL reflex points are on the right lower quadrant of the abdomen just inferior to the anterior superior iliac spine, the right medial anterior aspect of the upper arm just below the shoulder on the humerus at the area of the bicipital groove, and at the right lamina of the 3rd cervical. NV reflex point is in the lower right quadrant of the abdomen half way between the anterior superior iliac spine, and the lateral border of the rectus abdominus. Acupuncture points are B58 on the right on the posterior/lateral aspect of the gastrocnemius muscle and K5 on the right just below the medial malleolus. Subluxation of C5 is always found in this condition.

Closed ICV-NL is on the right at the costochondral junction from T8-T10 on the anterior and posteriorly at the lamina of T8-T10, and the right over the anteromedial thigh in the adductor muscle group. Acupuncture point is B58 on the right on the posterior/lateral aspect of the gastrocnemius muscle. Stress receptors discovered by Jack Elvidge, D.C., are correlated to specific muscle or organ area. This point correlated to both ICVS and is located ½ inch lateral of the posterior occipital protuberance. These appear to be some type of proprioceptors found in the skin and facial tissues of the scalp. These point TL and weaken a strong indicator. There are treated with a firm directional pressure that will weaken a strong indicator muscle in the phase of respiration that neutralized the weakness.

CONCLUSION:
A multi-faceted approach including technique commonly used in applied kinesiology has allowed eight IBS patients to control their symptoms with complete recovery or great improvements for at least a six month period. Adding chiropractic spinal manipulation to normalize the nervous system with nutritional support to reduce the stress and the use of emotional techniques such as TFT or NET, offers an intervention that may be highly effective in managing IBS.

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Mycotoxins - A PAK Approach

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ABSTRACT:
Mycotoxins are another piece of the puzzle in the chronically ill patient. A new simple AK screening procedure is now available to help discern if they are an issue with your patients. Environmental remediation as well as ingestion of certain nutritional substances to facilitate excretion can help bring health restoration to chronically ill patients.

KEY INDEXING TERMS: Mycotoxins, Mold Toxicity, Mold Pathophysiology

What are Mycotoxins?
Mycotoxins are toxins produced by molds or fungi that can appear in the food chain or from buildings that have water damage that is not immediately corrected. Molds such as Stachybotrys (Black Mold), Aspergillus, Acremonium, Actiniomycetes, Penicillium and Chaetomium, etc. can start colonies, which then send out spores producing mycotoxins as a survival mechanism.

Mycotoxins are well known in agriculture for contaminating crops and making livestock sick. Cooking and freezing do not destroy them and they resist decomposition or being broken down in digestion. The toxins themselves are lipophilic and are easily absorbed in the digestive tract, inhaled through the nose and can be absorbed through the skin.

Mycotoxins have been used as biological weapons. Evidence suggested that Russia had attacked Southeast Asia with "Trichothecene" mycotoxins ("yellow rain"), resulting in the deaths of thousands. Mycotoxins have higher toxicity than nerve gas. The people contaminated also had vomiting, dizziness, seizures, coughing blood, respiratory distress, low blood pressure, and blisters. Survivors were chronically ill for a long time with rashes, joint pain, fatigue, and memory problems.

Mycotoxins are found in a large percentage of cancers and affect nearly every system in the body. They can:

1. Inhibit protein, DNA, mitochondrial protein synthesis, and impair ribosome function.
2. Erode the myelin sheath causing neurological symptoms, seizures, headaches, muscle weakness, twitches, etc.
3. Cause immuno-suppression by allowing opportunistic bacterial and viral infections to occur.
4. Chronic exposure can lower white blood cell counts (toxic aleukia). Effects accumulate with repeated exposures.

Some of the more important/commons ones are:

Trichothecenes: Are produced by Stachybotrys and Fusarium, and they inhibit protein synthesis, kill cells and are extremely dangerous. Symptoms can include vomiting, pain, weakness, dizziness, ataxia, anorexia, diarrhea, bleeding, as well as depression of circulating white blood cells. Other symptoms include dry eyes, drowsiness, skin rashes, blood-red eyes, coughing/vomiting/urinating of

blood, nosebleeds, and skin can begin to bleed without reason. Brain function is impaired, from slurred speech to various psychological conditions from Multiple Personality Disorder to Paranoia.

Zearalenone: Is an estrogen mimic, most commonly causing vulvovaginitis in gilts (young female pigs). This condition sometimes leads to vaginal or rectal prolapse which commonly results in reduced litter size, loss of pregnancy, and poor milk production in affected swine. Males may be feminized to some extent. Similar syndromes occur in cattle and sheep fed zearalenone-contaminated feed.

Fumonosins: Are implicated in causing a disease of horses in which brain tissue is damaged and horses showed ataxia, facial and other paralysis, seizures, partial blindness, lethargy or excitement. Hepatotoxicity and nephrotoxicity are also seen. Fumonisins are also among the chief suspects for the agent(s) of elevated levels of esophageal cancer in humans in certain parts of the world.

Aflatoxins: Are produced by many species of Aspergillus, they are toxic and can be cancer producing especially when metabolized by the liver to a reactive intermediate, aflatoxin M1. High-level exposure produces an acute damage and cirrhosis of the liver as well as cancer of the liver. Children are particularly affected by aflatoxin exposure which leads to stunted growth and delayed development.

Ochratoxin A: A mycotoxin produced by Aspergillus ochraceus and Penicillium verrucosum and is one of the most abundant food-contaminating mycotoxins in the world. Human exposure occurs mainly through consumption of improperly stored food products, particularly contaminated grain and pork products, as well as coffee, wine grapes, and dried grapes. The toxin has been found in the tissues and organs of animals, including human blood and breast milk. Ochratoxin A is potentially carcinogenic to humans.

Mycotoxins have been found in a large percentage of cancers ranging from astrocytomas, mesothelioma, lung adenocarcinoma, renal cell carcinoma, and uterine cancers.

As many as 1,000 compounds are classifiable as mycotoxins. The pharmacology industry studied them as potential antibiotics in the 1930s and 1940s only to be discarded as being too toxic for higher life forms. You can now understand the mechanism of Penicillin and how it being a mycotoxin would kill undesirable bacteria, unfortunately also in the process killing beneficial bacteria.

Common Symptoms of Mycotoxins:

1. Rosacea or flushed face, rashes, facial hyperpigmentation, allergic shiners
2. Nasal turbinate inflammation, sinus infections
3. Hypothyroid symptoms, dry hair, loss of lateral third of eyebrow, cold hands/feet, heat intolerance, hair loss
4. Asthma, shortness of breath, cough, bronchitis, pulmonary aspergillosis
5. Fungal infections of skin, nails, vagina, groin and dandruff

6. Cognitive Dysfunction, short term memory loss, problems with color discrimination, ADHD, distractible, cannot read, cannot write, confusion, blurred vision, headaches, vertigo, deafness, dizziness, tremors, seizures

7. Pituitary damage, Multiple Hormone Deficiencies (Thyroid, Cortisol, Growth Hormone, Estrogen, Testosterone, etc.), Polycystic Ovarian Syndrome

8. Chemical sensitivities, sound and light sensitivity

9. Alcohol intolerance, hangovers, alcoholism

10. Cardiovascular disease, arrhythmias, seizures, stabbing sensations

11. Irritable bowel, gastro esophageal reflux issues, diarrhea, bloating, gas, leaky gut, food sensitivities

12. Immune Suppression, fatigue, muscle aches, joint pain/morning stiffness, arthritis, muscle weakness, abdominal pain, systemic inflammation

13. Weakness, numbness/tingling, skin sensitivity, static shocks, bladder paralysis, muscle paralysis

AK Application

With the advent of new test kits, it is possible to screen for myctoxins with applied kinesiology. Interestingly, we have found that about 50% of the positive test findings are when a strong indicator muscle becomes hypertonic on exposure to the toxin. Positive findings are very common in patients we have already cleared of fungal dysbiosis as eliminating the fungus may still leave the mycotoxins behind.

1. See if the mixed mycotoxin vial causes either a “strong muscle” to “weaken” or become “hypertonic”. Hypertonicity is more common. If it does, it is a positive test. If negative and you suspect mycotoxins, test all the individual mycotoxins the same way.

2. See if the positive vials are negated by any of the following and supplement as indicated

a) Smilax officinales - 1 cap 3x/day

b) Takesumi - 1 scoop twice daily

c) Schisandra - 1 cap 3x/day

d) Phyllanthus Fraternus - 1 cap 3x/day

e) Chrysanthemum morifolium - 3 caps 3x/day

f) Glutathione - 1 cap 2x/day

Prevention/Lifestyle and Treatment Considerations

1. Remove toxins from environment. Correct water leaks, moldy basements, air conditioner condensation, refrigerator catch basin, etc.

2. Consider air filtration (a combo of carbon and HEPA filtration)

3. Food sensitivity avoidance due to leaky gut caused by mycotoxins

4. Sauna, lymphatic massage. Be careful with sauna as patients may 'CRASH' when you release all the stored toxins from your fat. 20 minutes of sweating/day

5. Epsom Salt baths

6. Neurotransmitter support until toxins cleared from brain (Ashwaganda, L-tyrosine, L-tryptophan, Gaba, etc.)

7. Don't neglect to clear dysbiosis, toxin metals and food toxins to bring the most satisfactory results.

CONCLUSION:

It is the authors opinions that screening for mycotoxins should routinely be done on chronic patients as well as screening for dysbiosis, food reactions, toxic metals and chemicals, nutrient deficiencies, etc. The few minutes of time it takes is well worth the information you will elicit and will positively influence the clinical outcome.

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Nrf2 and TH1/TH2 Balance in Relation to Atopic Dermatitis and Asthma Implications for PAK Practitioners

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ABSTRACT:
The authors discuss a diagnostic approach utilizing manual muscle testing (MMT) of patients suffering with atopic dermatitis (AD). This approach has helped increase the specificity of muscle testing results and relief of patient symptoms. Specific PAK diagnostic and treatment protocols are recommended.

KEY INDEXING TERMS:
Professional Applied Kinesiology, Atopic Dermatitis, Eczema, TH1/TH2, Asthma, Filaggrin, Ceramide, Nrf2, Oxidative Stress

INTRODUCTION:
Over thirty plus years of combined practice, the authors have encountered a number of patients with mild to severe AD and allergic asthma. Many natural medicine approaches have been utilized to varying degrees of success. Prevalent factors include food reactions such as gluten-grain and bovine dairy sensitivity, gut microbial dysbiosis triggers, nutrient deficiencies, and metabolic imbalances including **oxidative** stress (OS) and **immune** dysfunction. Specifically, the authors attempt to discuss the importance of the transcription factor called nuclear factor (erythroid-derived 2)-like 2, or Nrf2, and T-Helper 1 and 2 (TH1, TH2) balance in relation to oxidative stress and immunity in these conditions. These factors have allowed a deeper understanding of many other inflammatory conditions as well.

DISCUSSION:
Atopic dermatitis affects 11% of American children and a total of 17.8 million people in U.S. with many undiagnosed cases. AD, or eczema, is defined as a type of inflammatory reaction of the skin in which there are usually vesicles then erythema, edema, papules, and skin crusting followed by lichenification and scaling of the skin. AD involves itching and burning of the skin and is often referred to as “an itch that has a rash”. (1) It may start in infancy, later in childhood, or in adulthood. Victims of AD can be symptomatic for months or even years.

For many years the authors viewed AD as an “inside-out” problem mostly triggered by food sensitivities (especially dairy and gluten) and related nutritional imbalances. (2) However, occasional patients have presented with dramatic AD symptoms even with avoidance of the typical food triggers. Fortunately, numerous recent clarifications have been related in the scientific literature to expand our understanding of the complexity of AD. For example, there is also an “outside–in” component related to the loss of some of the protective protein and lipid layer of skin.

Research indicates that a disrupted skin barrier also causes systemic allergic reactions such as increased IgE and airway hyper-reactivity. This suggests that dermal absorption of allergens in AD patients leads to the “atopic march” from AD to eventual allergic asthma. (3)

The "outside-in" pathophysiology of AD involves **filaggrin** protein and **ceramide** sphingolipid defects resulting in epidermal disruption. (3) This allows dermal immune cell exposure to environmental antigens and microbes, IgE antibody response, and TH2 subtype over-stimulation. TH2 activity tends to respond to and kill extracellular pathogens using antibodies in the humoral (body fluids) environment. TH2 IL3 stimulates mast cells in the tissues and basophils in the circulation. IL4 from TH2 stimulates B-cells to produce IgE and also stimulates eosinophils. IgE antibodies coat mast cells and basophils for an efficient reaction to presenting antigens. With adequate antigen presentation the mast cells and basophils degranulate to release a terrible cocktail of histamine and other mediators into the skin. (4, 5)

Antigen-specific T-Cells secrete IgE binding factors which lock the immune complexes in the area promoting extended local release of inflammatory mediators, especially histamine and heparin. Intense itching results due to low itch threshold to environmental irritants and also due to IL31 from TH2. Scratching leads to further inflammation and loss of the protective skin layer resulting in an ongoing cycle of worsening AD symptoms.

Ceramides are physiologically active components of the lipid bilayer in cell membranes that are deficient in AD patients. They consist of the amino acid sphingosine at the head and a fatty acid tail. They provide important cell signaling for appropriate differentiation, proliferation, and apoptosis. Ceramide levels are increased in response to many stressors as well as increased vitamin D in skin. Intracellular pathogens can interfere with normal function of the nuclear vitamin D receptor (VDR) and, thus, may play a role in altered ceramide production. Ceramide also helps limit the spread of cancer in skin. (6) Ceramide lotions and supplements are available but many are made from wheat. The less allergenic ceramide from sweet potato is recommended.

Filaggrin

Holmes, et al. summarizes:

"Filament aggregating protein (filaggrin) is a key protein that plays an important role in formation of the cornified cell envelope (CCE), which is critical for an effective skin barrier. Filaggrin binds to and is responsible for the aggregation of keratins (K1/10) which induce the cytoskeleton to collapse and result in formation of corneocytes. These corneocytes are then heavily cross-linked by the action of transglutaminases and comprise the CCE." (3)

AD skin is characterized by over-expression of the Th2 cytokines, especially IL-4 and IL-13. It has been demonstrated that IL-4 and IL-13 create much of the skin barrier derangement by affecting filaggrin protein expression. Less than one-third of the AD population carry the well-known filaggrin loss of function mutations (R501X and 2282del4) and are even more predisposed to AD and potential asthma. (3, 4, 5) One theory regarding the immune system is that the beneficial programming and maturation of the TH2/TH1 balance is originally encouraged by common infections of early childhood.

Therefore, it is necessary to modulate **TH2 cell function** and minimize their related cytokines in any curative effort with AD and asthma sufferers. TH2 is stimulated especially by allergens, extracellular pathogens, worms, parasites, and fungal overgrowth. In the authors experience **much of the driving force that keeps the AD sufferer in an allergic state is gut dysbiosis, especially fungal overgrowth and helminth infection**.

Another important factor to consider is that an over-stimulated TH2 population will down-regulate TH1 by action of IFN-Y. TH1 is especially important in providing cellular immunity against viruses and tumor cells. Thus, achieving a reduction of TH2 toward TH2/TH1 balance is important for cancer prevention. Interestingly, in some chronic AD cases it is reported that this typical TH2 dominance can reverse to become TH1 dominant. The immune regulating recommendations below also apply to the TH1 dominant AD pattern. (7)

Natural Medicine Recommendations:
The PAK practitioner is in a commanding position using MMT to discern the most effective remedies for these problems. Many natural remedies can be helpful in treating the AD and asthma sufferer. Two types that stand apart in testing and in restoring TH2/TH1 homeostasis are **isopathics** and **Nrf2 synergizers**. These technologies are beneficial at the gut, immune, and dermal levels.

Isopathic remedies are a type of Cellular Reprogramming Therapy for the immune system. When properly prepared they are well tolerated by all ages. They consist of highly specialized metabolites from fungal and bacterial organisms documented to function as anti-inflammatory, anti-oxidant, and immune modulaters, including the crucial TH2/TH1 balance. These remedies are made from penicillium notatum, mucor racemosis, penicillium frequentans, penicillium roqueforti, aspergillis, and candida parapsilosis. (8)

Nrf2 synergizers are a recent nutriceutical technology that is gaining a serious presence in the pub-med.gov peer-reviewed research database. At this writing there are over 3000 articles on PubMed regarding Nrf2. There are 12 links to Nrf2 and dermatitis on PubMed and 99 links regarding Nrf2 and skin. The Nrf2 system primarily functions as the **master regulator of anti-oxidant response** by upregulating endogenous glutathione peroxidase (GPx), SOD, and catalase. Nrf2 is also immune regulating and thus very effective for AD and asthma sufferers. Oxidative stress (OS) is established as a significant component of many common diseases (heart disease, stroke, diabetes, dementia, cancer). OS disturbs and damages proteins, lipids, and DNA, as well as triggering faulty signaling of apoptosis and increased fibrosis. These factors are all important to the recovery from AD and asthma. There are several natural substances found to stimulate Nrf2 in PubMed references. When strongly stimulated the anti-oxidant power of Nrf2 stoichiometrically eclipses that available from food and supplement based anti-oxidants and, thus, is a potential "game-changer" for AD and asthma sufferers. (9, 10, 11, 12, 13, 14, 15, 16, 17)

Nutrient/remedy summary for testing:

- **Gut dysbiosis** – antimicrobials and high dose, broad spectrum probiotics
- **Isopathics** – pennicillium notatum, mucor racemosis, pennicillium frequentans, pennicillium roqueforti, aspergillis, and candida parapsilosis
- **Nrf2 synergizers** – powerful indirect antioxidant, anti-inflammatory, immune regulation
- **Quercitin** – very helpful anti-histamine, anti-inflammatory, anti-lipoxygense, anti-viral, decreases capillary permeability
- **Omega 3** and **Omega 6** fatty acids – skin hydration and anti-inflammatory
- B-vitamins – especially B6, B3, and B5
- Ceramide – test palm oil and serine, phosphatidyl choline, amino acids, EFA, Vitamin D (best from sunlight); kidney, liver, gut epithelium function
- Phellinus linteus mycelium extract – specific immune balancer for AD (7)

- Vitamin A – Retinol form from animal source to promote skin repair by epithelial growth factor
- Zinc – common AD deficiency, < 15mg/day; SOD, catalase prouction
- Selenium – GPx production
- Manganese – SOD and GPx production
- Magnesium – protein synthesis, anti-inflammation
- Sulfur – support sulfation
- Amino acids – especially glutamine, taurine, and branched chain AA's; raw material for ceramide and filaggrin production
- Choline – anti-stress, supports digestion and enteric nervous system
- Drainage remedies – Lymphatic, sometimes KI or LV
- RNA – protein synthesis support
- Emu oil – topical moisturizer to minimize trans-epidermal water loss leading to skin dehration, source of EFA
- Sea salt compresses – effective topically for itch

PAK Testing:
The above remedies can be tested from any related muscle inhibition or TS-line indicator. Commonly we will find a swollen or tender **lymph node** in the area of symptoms and test it with a magnetic wand or by direct TL for weakening, then screen for any organ or **Alarm points** that negate the induced weakness. That point will then be screened using the magnetic wand with MMT for strengthening remedies/supplements, related reflexes, acupoints, and structural corrections. In many cases a high quality multi-vitamin-mineral can suffice to supply most of the individual nutrients listed above. (18, 19) Cytokine test kits for use with MMT indicators can be very helpful in narrowing the therapeutic approach. Various types of kits are available from several suppliers and some can be used on the body with a diagnostic bar magnet or by placing over GV20 or GV27 without the magnet. If, for example, IL4 and/or IL13 create a weakening of an indicator muscle, then that weakness can be exploited to find corrective remedies and treatments that can help balance TH2. (20)

PAK lymphatic techniques will reveal other important structural corrections. Bleach challenge (Schmitt) is appropriate for screening anti-oxidant support. (21)

Likely as a result of the pathologic microbial heat in the small intestine AD patients will sometimes complain of emotional instability sometimes to the point of hysteria, especially at night during itching episodes. Heart Yin acupoints (ex: HT7, HT3) can be very calming in this presentation. Instruct the patient to stimulate the points throughout the day, again before bed, and during emotional stress.

Additionally we recommend AD and asthma patients minimize time spent using devices with backlit screens during the day and especially within an hour before bed. This includes laptops, TV, cellphones, some readers, and tablets. Backlit devices as well as fluorescent lighting can over-stimulate the mesencephalon, triggering "fight or flight" physiology, and may result in a general up-regulation of any inflammatory AD or asthmatic symptom. Simply dimming screen brightness during the day is often adequate. Using mildly shaded glasses can help with fluorescent lighting. Patients who do not tolerate light or whose pupils will not constrict adequately to direct light should be considered for these factors.

CONCLUSION:

Obviously AD and asthma can be complicated health issues in any given patient. The PAK practitioner has an extraordinary and expanding set of clinical tools to help rapidly screen for all of the factors mentioned in this discussion. With a comprehensive approach born of knowledge and testing, it is not uncommon to see approximately 50% improvement in the redness and some retreating borders of AD lesions within two weeks, and similar improvement in airway reactivity in allergic asthma. The most important pieces seem to be **avoiding food irritants, relentless attention to gut dysbiosis, suppression of histamine and oxidative stress,** and **reprogramming of the T-Helper system** over the short and long term.

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Patellar Immobility and the Infrapatellar Contracture Syndrome

David Leaf, D.C., DIBAK

ABSTRACT:
The medical literature lists this as an uncommon finding but it is a commonly overlooked problem of decreased mobility of the patella due to arthrofibrosus. When this occurs there will be weakening of portions of the quadriceps muscle that can be missed with normal muscle testing. If uncorrected this leads to increased inflammatory changes underneath and surrounding the patella as well as instability of the pelvis.

In the beginning, dealing with athletes, it became apparent that there were weaknesses and inhibition of the quadricep muscle that were difficult to correct.

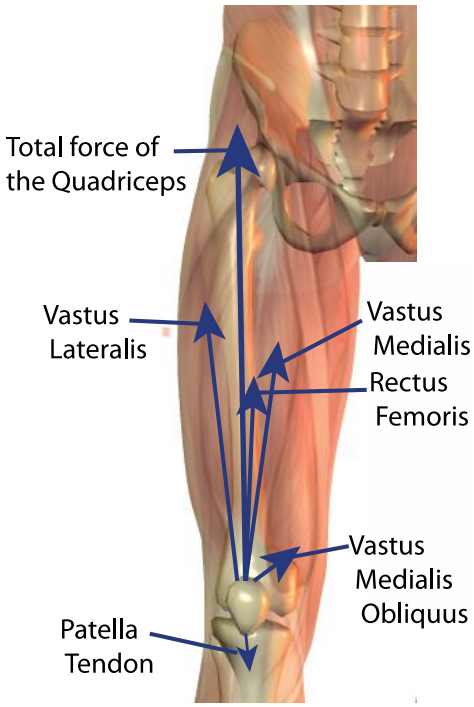
One of the first patients encountered with this problem was a goalie for a professional soccer team who had been kicked in the patellar tendon. He was having great difficulty moving laterally as well as kicking the soccer ball.

Testing showed dramatic weakness of both the rectus femoris and the vastus portion of the quadriceps. Cross-frictional massage to the patellar tendon and to the tissue superior to this resulted in increased mobility of the patella. That weekend he was able to perform normally on the soccer field and increased the distance of the ball when kicked by over 30 meters.

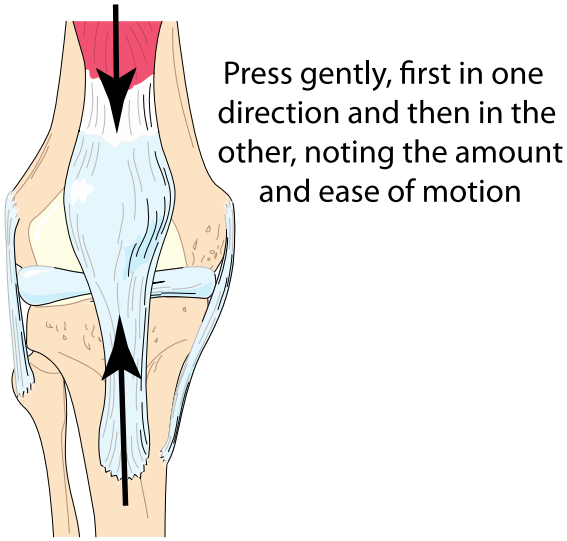
This condition has been found more frequently in patients as they age. However, injuries sustained by teenage athletes may also show this problem. It is not uncommon to find atrophy of the quadriceps when this condition has been present for any length of time.

Common symptoms include tenderness, local swelling around the patella, difficulty climbing stairs, getting off of the floor, getting out of the car, getting out of a chair, ache or soreness after long walks or running, inability to hyperextend or even fully straighten the knee, and pelvic instability.

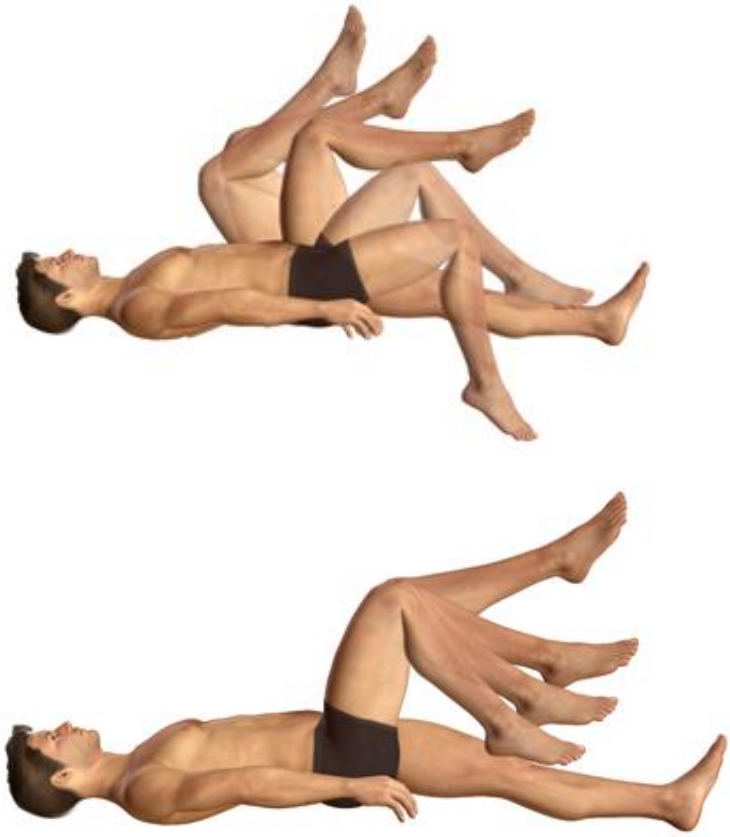
The abnormal forces on the patella create additional inflammation and can result in chondromalacia patella and other degenerative changes in the knee.



The patella is supposed to move superior and inferior in the groove of the femur approximately 1.5 – 2.0 cm. Placing your fingers on the superior and inferior aspect of the patella and applying gentle pressure both inferior and superior easily tests for this. The patella should move easily in both directions as well as laterally and medially.



Next, test the rectus femoris and the vastus portion of the quadriceps at varying angles. This should be done at knee flexion of 20, 40, 60, 80, 100, 120 and 140 degrees. This is done to simulate the angle that the knee must be bent at climbing stairs, getting out of the car, and getting up off of the floor.



When this condition is present, you will generally find not only weakness of the quadriceps muscle but a general retro patellar pain pattern. With the inhibition of the quadriceps muscle the innominate will have a tendency to rotate posteriorly. If you observe the patient walking, you will tend to find a short stride on that side.

To test the frequency of this problem, patients with knee or pelvic imbalances were tested for this over a six-week period. New patients to the office or patients who had not been in the office for over two years were examined and records kept. There were a total of 92 people who fit this category. There were 16 cases under the age of 20 and of these four had this problem. Between the ages of 20 and 40, there were 33 cases and of these 21 showed the above pattern. Of the remaining 43 cases above the age of 40, 38 showed the problem.

In each case, the patellar tendon and the tissue superior to the patella in a triangular area approximately covering 14 cm superior to the patella were mobilized using a percussor and then cross frictional massage.

Instructions for the patient to perform the cross-frictional massage each morning were given. A handout describing the treatment to be done at home was given to each patient. This mobilization was to be done at home for 14 days.

For those patients who had extreme tenderness especially around the patellar tendon were advised to cut an ibuprofen gel cap and rub the liquid into the area around the tendon. The gel penetrates the skin and dramatically reduces the tenderness and inflammation. This was generally only needed for two to three days to allow compliance for the home massage.

Exercise to strengthen the quadriceps by performing step-ups, a closed chain exercise, was given. Testing in the office was used to determine the number of repetitions that the person could perform before the muscle became inhibited. Exercise tolerance was determined by using approximately 75% of this value. For example, after correction the involved muscle was tested until it became inhibited. If the muscle was able to contract four times before becoming inhibited, the patient was instructed to perform sets of three.

In general, the repetitions were performed with a four to five second delay between sets until a total of 24 exercises were performed. This was to be done approximately six times each day. After one week of exercise, they were to increase to performing five sets of five and the following week to three sets of eight. This progressive rehabilitation was based on prior experience.

The patients were then reevaluated after performing this at home for three weeks. All but six of the patients followed the instructions. These six patients showed the same weakness pattern as before. Of the remaining group, the average person was now able to perform between 10 and 15 repetitions before weakening of the quadriceps muscle.

CONCLUSION:

A commonly missed cause of quadriceps malfunction is immobility or partial immobility of the patella. This condition is not well documented in the literature and is a very commonly missed problem in the clinical setting. It demonstrates the need to test the quadriceps at varying angles in order to isolate and find the problem. Accurate treatment involves the patient becoming actively involved in the process with doing home mobilization of the tissues and rehabilitation of the involved quadriceps.

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Quadriceps and Patella Tendon Massage Handout

The muscles that control the knee cap can develop adhesions that limit mobility. When they are injured, you have a tendency to have not only an ache in the muscle, but you will also develop pain or ache around your knee cap (patella).

Left untreated, the shortening of these structures lead to degenerative changes under the knee cap.

Place hand lotion on the skin over the muscle and massage towards the pelvis for twenty times concentrating on the tenderest areas. Use your knuckles and do this on both the inner and outer sides of your thigh.

This should be followed by going back and forth with a sawing action with the elbow or knuckles over the front of the thigh muscle and then below the knee cap over the tendon. The massage on the tendon should be done with the leg straight and the muscle relaxed. This relaxes the tissues and makes it easier to massage.

Always go from lower in the leg up towards the pelvis.

P-DTR Approach to the PiLUS Pattern Dysfunction

Jose Palomar, M.D., O.S., DIBAK

ABSTRACT:
This is a new approach to the treatment of the PiLUS dysfunction, where the practitioner can fix the problem in a couple of minutes, dramatically reducing time of treatment.

HISTORY:
"Illi discovered that if the vertebral column is bent forward, upon a fixed pelvis, the sacrum does not move, as one might expect, anteriorward, but it performs a rotation around its perpendicular axis. On each examined cadaver, the movement was asymmetrical and of variable extent. The 5th lumbar vertebra deviated in the opposite direction from the torsion of the sacrum." Illi demonstrated that excessive tension is placed on the spinal cord with lumbar flexion if the lumbar vertebrae does not rotate in conjunction with flexion.

In the Sacro - Lumbar region this tension is eliminated when the muscles of right Popliteus, Iliacus and Sternocleidomastoid, and left Latissimus Dorsi, and Upper trapezius inhibit while the patient flexes to 35° or extends 20° the lumbar spine (approximately). "Illi, National College of Chiropractic."

As the right leg moves forward, the sacrum moves posteriorly and the 5th lumbar vertebra rotates anteriorly in counterrotation to the sacrum. In the normal spine and pelvis this action is started by facilitation of the piriformis on the left and inhibition on the right. Goodheart observed this consistent facilitation and inhibition in the normally functioning person and recognized the potential of using the information to find the cause of dysfunction.

INTRODUCTION:
The muscles' initials are the derivation of the PiLUS acronym: Piriformis, Iliacus, Latissimus dorsi, Upper trapezius and Sternocleidomastoid. With normal function, the previously strong right piriformis tests weak when the standing or sitting patient flexes the lumbar spine to approximately 35°. The exact amount of flexion is not specific. The inhibition may take place with as little as 20°, but one should make certain that the patient moves into full flexion. The same inhibition of the piriformis should be present with lumbar spine extension when the patient is sitting, standing, or prone. David Walthers (Synopsis 2nd Edition).

PROCEDURES:
I studied 180 random patients, 40% of which were males and 60% were females, who sought consultation for various reasons, and who showed Pilus dysfunction problems. After evaluating the patients with classical AK techniques, I reevaluated the patients using P-DTR techniques to confirm the diagnosis.
The most common symptoms were:

1) Lower back pain
2) Neck pain
3) Sciatica
4) Limited range of motion of the lumbo - pelvic complex
5) Gait dysfunctions

METHOD:

Procedure: Test the five muscles of the PiLUS; to be sure they are strong in the clear. Test all five muscles while the patient flexes to 35° or extends 20° the lumbar spine (approximately). If the inhibition pattern fails, then the patient is moved into full flexion or extension.

The patients were tested in standing and sitting position.

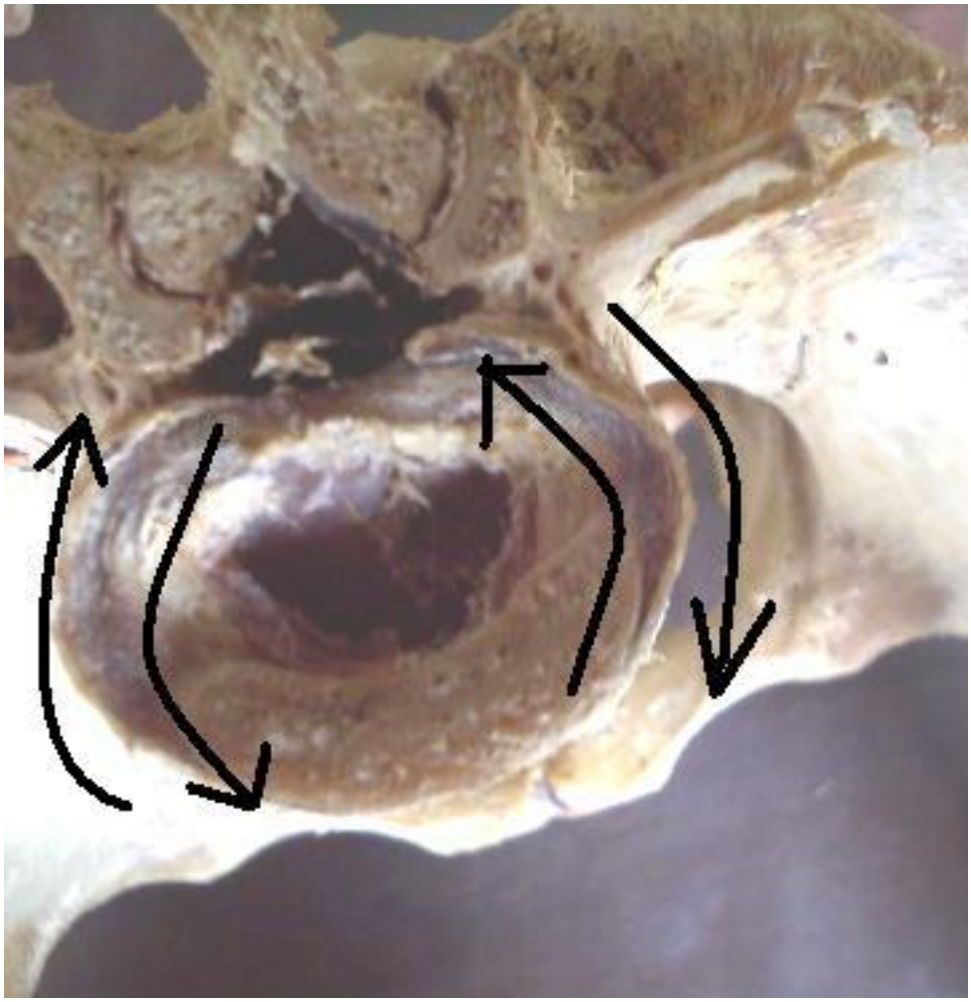
When failure of proper inhibition of the PiLUS muscles presents, and the dysfunction was diagnosed, the treatment was applied.

TREATMENT:

Treatment can be simplified by first activating the PiLUS pattern: The seated patient flexes the spine and externally rotates the right femur against resistance, activating the Piriformis. Simultaneously the internally rotated left arm is pressed to the side to contract the Lat. Dorsi. Also lateralize the head to the left to contract the Upper Trap. With resistance and the practitioner activates the right S.C.M. by tapping the belly of the muscle. With all of this activated the practitioner elicits a Deep Tendon Reflex. Retest the PiLUS pattern to confirm proper function. It may be necessary to repeat the treatment in the extension position.

(Treating PiLUS pattern with P-DTR technique)

The correction is achieved by resetting, with DTR, the brain's recognition of an established pattern instead of trying to correct individually the proprioception of the different dural components found to be deficient.


(Rotation of the Lumbosacral spine)

RESULTS:
With both techniques, classical AK and this new method were found to be 100% in agreement. I found two main advantages over the classical method; P-DTR treatment is easier and faster. If the dysfunction reoccurs, look for chemical or emotional problem.

In classical AK, to treat the dysfunction the practitioner should look for:

- Category I
- Category II
- Category III
- Sacral fixation/subluxation
- Yaw #2 weight bearing
- Iliacus malfunction, usually right sacral basic contact required
- L5 fixation or subluxation
- Occipito-atlantal fixation or subluxation
- Upper cervical fixation or subluxation
- 1st rib fixation
- Cervical compaction for imbalance of passive vs. active range of motion
- Foot and ankle involvement
- TMJ problems

CONCLUSION:
The preceding procedure will simplify and, at the same time, broaden the scope of treatment of two basic AK testing methods. P-DTR resets the neurology and restores the normal function. This option is faster, reliable and complete.

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P-DTR Classification of Dysfunctional Receptors Neurological Dysfunctions in Paired

Jose Palomar, M.D., O.S., DIBAK

ABSTRACT:
Most of the techniques work on neurological and neuro muscular dysfunctions, as if they are isolated and do not take into account their relationship with others that are closely linked.
In this research I make a classification of how the brain and nociceptor receptor dysfunction and work. Due to extensive research, I will describe the rankings and summarize the protocol.

INTRODUCTION:
Mechanoreceptor Rules: In the normal nociceptor o mechanoceptor, the lack of stimulus decrease the response of the nervous system, more stimulus increase the response. If the receptor has a dysfunction means that it is hypersensitive and the threshold is too low, or it is hyposensitive and the threshold is too high.

Dyfunctions: Stimulation of the primary Mechanoreceptor increases the dysfunction in the primary and secondary Mechanoreceptors.

Stimulation of the secondary Mechanoreceptor decreases the dysfunction in the primary Mechanoreceptor and increases the dysfunction in the secondary. Tertiary receptor dysfunctions are virtual cousins of the other two dysfunctional receptors. Even partial resolution of the other receptors will strengthen the weak tertiary receptor muscle.

For example: a primary hyper nuclear chain fiber dysfunctional muscle tests weak in the clear. The related secondary nuclear bag fiber muscle tests strong in the clear. Stimulation to the nuclear chain fiber muscle (primary), with multiple taps, would cause weakness to the nuclear bag muscle (secondary). The nuclear chain muscle would remain weak. Stimulation to the nuclear bag fiber muscle (secondary), with several swipes, would weaken that muscle and would strengthen the nuclear chain muscle (primary).

What is important is that you must stimulate the primary receptor plus DTR to properly get to Basic mode. Stimulation to the secondary receptor will not take the system to Basic mode, which consists of one primary and one secondary receptor as a dysfunctional pair. You will not eliminate virtual secondary receptors, which are found in a multi-presentation. Should you stimulate a virtual secondary receptor and apply DTR; you will only succeed in eliminating that muscle from the dysfunctional complex. Should any other virtual secondary muscles be found in the complex, they will remain unchanged. Note that all multi-presentations belong to the secondary receptor.

Most recently I have found that the primary dysfunctional receptor will, with two-handed therapy localization, inhibit any strong indicator muscle (with no stimulus).
All primary receptors exhibit this trait.

Normal stimulation of any mechanoreceptor should not cause change in muscle function. Prolonged

stimulation of any mechanoreceptor should, after about five to ten seconds, cause inhibition in that muscle. These are normal responses.

PROCEDURE:
Classification of Dysfunctional Receptors: Primary, Secondary, Virtual Secondary, and Tertiary Dysfunctions.

Primary, Secondary, Secondary (Virtual) Dysfunction can be found in:
Mechanoreceptors, Nociceptors, Temperature receptors, etc.
Tertiary Dysfunction can be: Intrafusal Muscle in Muscle Spindle Cell

Primary Dysfunctional Proprioceptor
Stimulation of the Primary receptor + DTR will send the Dysfunction to BASIC mode. Stimulation of the Primary receptor increases the dysfunction in the primary, in the secondary, in the virtual secondary and in the tertiary muscles.

Secondary Dysfunctional Proprioceptor
Stimulation of the Secondary receptor + DTR DOES NOT send the Dysfunction to BASIC mode. Stimulation of the Secondary receptor increases the dysfunction in the secondary receptor and decreases the Primary dysfunction temporarily. It does not affect virtual or tertiary.

Secondary Virtual Dysfunctional Proprioceptor
Stimulation of the Secondary virtual receptor + DTR does not send the Dysfunction to BASIC mode, but eliminates itself. Stimulation of the Secondary Virtual receptor increases the dysfunction in the secondary receptor and decreases the Primary dysfunction temporarily. It does not affect other virtual or tertiary.

Tertiary Dysfunctional Proprioceptor
Stimulation of the Tertiary receptor with or without DTR has no effect.
Stimulation of the tertiary receptor facilitates itself, but has no effect to the rest of the dysfunction. The tertiary receptor is a hypo response of the receptor.

An example of tertiary receptor is the intrafusal muscle in the triad with Nuclear Chain Fiber and Nuclear Bag Fiber dysfunction. All Hypo receptors have no T.L.

Mechanoreceptors Dysfunction Classification

- Basic: one strong Primary + one strong Secondary
- Multi: one strong Primary + 2 or more strong Secondary
- Hyper: one weak Primary + 1 weak Secondary
- Hyper Multi: one weak Primary + 2 or more weak Secondary
- All Multi: one strong Primary + all strong Secondary
- All Hyper Multi: one weak Primary + all weak Secondary

- ❖ Reactor – Reactive dysfunction shows a different inhibition pattern, because it has the primary and secondary dysfunctional mechanoreceptors in the same muscle. Thus, one compensates the other and the muscle test strong, and only the tertiary dysfunction appears in the so-called reactive muscles.

METHOD:
I studied 400 random patients, 48% of which were males and 52% were females, seeking consultation for various reasons, and *who either showed problems related to hypo or hyper-function of the receptors.*

Initially I checked for and corrected switch if found; structural imbalances, emotional conditions, metabolic problems and eliminated any medical treatments even for unrelated diseases. If drug treatments were not possible to avoid, then the patient was rejected from the research.

We handled each condition in this research focusing in the neuro structural side of the triangle of health. We test the nociceptors and mechanoreceptors using the technique described in previous papers published in the proceedings. The nociceptors were treated with Neo and Paleo spinothalamic dysfunction technique, and for mechanoreceptor I used the technique for the muscle spindle cell dysfunction, paired between nuclear chain fiber vs nuclear bag fiber.

We fixed (if found) Temporal Cranial Faults, Zinc deficit, Vitamin B6 deficit, Guanidine production, and discontinued all kind of Antacid treatment, etc.

Since these dysfunctions are very common, I recorded a muscle spindle dysfunction and a nociceptor dysfunction in every patient.

TREATMENT:
The treatment of the dysfunction consisted in sending the dysfunction to a basic mode, and then fixing it, by stimulating both receptors involved and eliciting a deep tendon reflex in any joint of the body as described in the procedure section.

FINDINGS:
There were no differences in the results by the gender.

RESULTS:
All 400 patients showed paired dysfunctions, and ALL RULES applied to them all the time.
There were no exceptions to the rules.

DISCUSSION:
PAIRED RECEPTOR FIELDS
In the past we have mostly treated proprioceptive problems in a one muscle, one receptor fashion. Our treatments would only attain what we now describe as Basic mode, which we now know to be incomplete.

We now understand that we need to simultaneously treat paired dysfunctional proprioceptive areas to properly resolve the aberrant pattern.
Also, the focus of our intervention has greatly changed. Before, our interventions were to change

some characteristic inherent to the muscle, but now we are trying to present the dysfunctional pair, in such a way that the Central Nervous System recognizes its error, and then use a DTR to reset. The Central Nervous System reorganizes itself in this context and the previous dysfunction now tests normal, and all challenges are negative.

CONCLUSION:

Now we have another piece of the puzzle of neurological behavior. We need to make more research about the neurology and increase the knowledge of this art and science.

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Procedure Summary for Eliminating Rigidity in the Non-Walking Child

Walter Schmitt, D.C., DIBAK, D.A.C.B.N.

ABSTRACT:
Assessment and treatment procedures for the care of brain-injured children are presented in a step by step outline. This approach uses a novel synthesis of principles of applied kinesiology and chiropractic neurology within the organization afforded by the Quintessential Applications Clinical Protocol. Although the procedures were developed with the focus on eliminating the rigidity of the non-walking child, they have also been effectively employed with other types of brain injury and are applicable to any patients with imbalances in muscle tone of central origin.

KEY INDEXING TERMS:
Applied Kinesiology, Brain Injury, Rigidity

INTRODUCTION:
Beginning in 1995, there has been an "Annual AK Day" at The Institutes for the Achievement of Human Potential (IAHP) in Wyndmoor, Pennsylvania. Dr. Jerry Morantz and Dr. Walter Schmitt have been attending and presenting to the staff at the IAHP on a yearly basis since the beginning of the "AK Day" event. Other presentations have been given by IAHP staff members as well as a number of other invited AK doctors.

In 2010, the official name for the event was changed to the Annual Mobility Day Meeting to more specifically represent the issues of improving movement in brain-injured children.

On Thursday, September 8, 2011 at the 15th Annual "AK Day", the procedure described in this paper was presented to the staff of the IAHP and a profoundly brain injured child with severe global rigidity was treated following this format. The approximately 20 minute session created dramatic responses of decreased rigidity and increased ranges of motion. This prompted a request from the IAHP staff for a written summary of the diagnostic and treatment procedures demonstrated. At the 16th Annual "AK Day" meeting on Friday, September 7, 2012, the procedural outline below was presented.

Hypertonia is defined as "abnormally increased resistance to externally imposed movement about a joint." (1, 2) Sometimes hypertonia is simply referred to as "resistance to stretch." The term hypertonia has nothing to do with muscle strength per se. There are three subtypes of neurologically mediated hypertonia: spasticity, dystonia, and rigidity.

Spasticity is defined as hypertonia in which "resistance to externally imposed movement increases with increasing speed of stretch and varies with the direction of joint movement and/or in which resistance to externally imposed movement rises rapidly above a threshold speed or joint angle." (1)

Dystonia is defined as "a movement disorder in which involuntary sustained or intermittent muscle contractions cause twisting and repetitive movements, abnormal postures, or both." (1)

The definition of rigidity is a "velocity-independent bidirectional resistance which may involve simultaneous co-contraction of agonists and antagonists." (2)

Mixed tone is when two subtypes of hypertonia are present. (1)

DISCUSSION:
Rigidity can be used as a measurement to identify which pathways are malfunctioning in both brain-injured and non-brain-injured patients. In the brain-injured patient, the assessment of rigidity is combined with other diagnostic and examination findings to identify areas of pathology. In the non-brain-injured patient, assessment of rigidity can be combined with manual muscle testing (MMT) and applied kinesiology (AK) and serve as an aid in identifying the level of central nervous system lesions and well as contribute to prioritizing treatment procedures.

AK employs MMT as a unique, primary patient evaluation tool. MMT, and hence AK, in their most elegant forms represent an expansion of the neurological examination. (3)

The approach presented below is based on a novel synthesis of principles of neurology and procedures developed based on MMT and AK. The patient's history, physical exam findings, and laboratory findings are correlated with principles of chiropractic neurology and AK. The areas of rigidity are assessed throughout the body and ranked from the areas of greatest rigidity to the areas of least rigidity.

The patient is then addressed in a manner of "what to do first, next, and last" based on the principles of the Quintessential Applications Clinical Protocol. Treatment procedures are also derived from manipulations and procedures very familiar to AK doctors and emphasized in the Quintessential Applications Clinical Protocol. (4)

When addressing neurological problems, either functional, pathological, or combinations of both, the order of therapeutic application is critical. Treating any given pathway will cause excitation and inhibition to other pathways. Therapeutic stimulation to a pathway that is out of sequence for optimal treatment application will often result in over or under activity in other pathways as compensation and this will undermine optimal patient response. This will be seen be increased rigidity or imbalances in right-left muscle tone, decreased ranges of motion, and/or altered autonomic activity (e.g., pupillary reflexes, heart rate.)

It is essential, to achieve optimal results, that a neurologically based protocol be followed and that each step of the treatment effort be monitored for appropriate response prior to moving on to the next treatment step. (5) The procedure below affords the opportunity to address a patient's nervous system in the optimal fashion. This is observed by changes of decreased rigidity, balance of right-left muscle tone, increased ranges of motion, and normalizing autonomic activity at each step of the process.

Although these procedures were developed with the focus on eliminating the rigidity of the non-walking child, they have also been effectively employed with other types of brain injury. In addition they are applicable to any patient with muscle tone imbalances of central origin. In non-brain-injured patients, the use of MMT enhances the clarity of the neurological principles presented by providing an additional somatic window on neurological function.

PROCEDURE SUMMARY FOR *ELIMINATING RIGIDITY IN THE NON-WALKING CHILD*

NOTE: All injuries including tooth "injuries" from dental work should always be treated FIRST using Injury Recall Technique (IRT), Set Point (Touch & Tap) Technique, and/or Noiciceptor Stimulation-Blocking (NSB) Technique (4).

Overview:
1. Identify pattern(s) of rigid muscles
2. Test for changing rigidity pattern with various inputs based on:
    Patient History, Labs
    Observing Pattern(s) of Rigidity
3. Add to program those therapies (structural, neurological, nutritional) that changed the rigidity pattern

Specific Steps:
1. Identify pattern(s) of rigid muscles. Attempt to identify most obvious rigidity pattern as the primary pattern. Other less obvious patterns as secondary.

Bilateral rigid patterns (Mesencephalic Reticulospinal tract)
    Bilateral muscle involvements - patterns of:
        Flexion- Extension
        Lateral Flexion
        Rotation around midline (gait pattern)
        Any bilateral muscle patterns (e.g., bilateral tight biceps brachii)

Bilateral rigid patterns (Other Descending Reticulospinal tract – arising from cortex – "Pyramidal distribution")
    Increased muscle tone in posterior muscles (extensors) above T-6
    Increased muscle tone in anterior muscles (flexors) below T-6
        Pattern of "stroke antalgia"

Flexor rigidity (or weakness if neuron fatigue) (from contralateral Rubrospinal tract)
- Contralateral flexors – usually upper and lower limbs. May be distal muscle pattern or proximal muscle pattern or both
    - Upper limb example: Opponens
    - Lower limb example: Posterior tibialis

Autonomic Patterns (from Intermediolateral cell column)
- Recurrent ileocecal valve problem (open or closed) on the right or a Houston valve problem on the left (open or closed)
- Bilateral sympathetic effects, greater on one side

2. Test for changing rigidity pattern with various treatment inputs based on patient history and stimuli to affect the neurological area for the origin of the rigidity pattern.

A. From Patient History / Labs, etc.
1. Allergies

- Treat small intestine CRs (quadriceps and/or abdominal CRs) with IRT (with oral offender when possible)

2. Dysbiosis
   - Treat large intestine (TFL) CRs with IRT (with oral offender when possible)
3. Vitamin B-12 (including hydroxyl- and methylcobalamin) - taste
4. Folic acid (including 5-MTHF) - taste
5. Systemic Infections – thymus and/or spleen CRs (see below)
6. Heavy Metals – treat lower sternum CRs; treat parotids with IRT (with oral offender when possible)
7. Any; organ – infection or inflammation – treat with IRT to CR (with oral offender when possible)

B. From Observing Pattern(s) of Rigidity

1. Immune system CR on side of involved mesencephalon will decrease rigidity
   a. Right side: Rub Thymus CR
   b. Left side: Rub Spleen CR
   c. Either side: Lower Sternum (Heavy Metals) - IRT Parotid

2. Ipsilateral Cortex
   a. Right brain – music (e.g., Mozart) in left ear
   b. Left brain – looking at page of random letters, math exercise), etc.

3. Unilateral patterns associated with individual organs
   a. Liver CR - IRT or Rub (affects left Mesencephalon - may excite or inhibit)
   b. Pancreas CR - IRT or Rub (affects right Mesencephalon - may excite or inhibit)

4. Opposite Cerebellum: Three Semicircular canals
   a. Lateral Canal (rotate head)
   b. Posterior canal (tilt head back)
   c. Anterior canal (tilt head forward)

      Note: Canals and related neurological pathways may be **stimulated** by moving the head in a direction that fires that canal, especially with the eyes closed.

      Note: Canals and related neurological pathways may be **inhibited** by moving the head in a direction that fires that canal with the eyes fixated on a distant point.

   • Firing involved canal(s) will temporarily change rigidity. If positive:
   • There will be a structural or neurological fault in related body area / quadrant:
      • Lateral canal (rotate head): ipsilateral posterior or ipsilateral lateral
      • Posterior canal (tilt head back): ipsilateral posterior quadrant
      •Anterior canal (tilt head forward): ipsilateral anterior quadrant

5. Opposite Cerebellum: Lateral flexion patterns – associated with endocrine imbalance

   Supine:
      • “)” = hyperadrenal (same as increased cortisol) – if helps, treat to decrease adrenal
      • “(” = hypoadrenal (same as low cortisol) – if helps, treat to increase adrenal

6. Stimulation of one mesencephalon inhibits opposite mesencephalon
    - e.g., light stimulation – from nasal side – stimulates ipsilateral mesencephalon

Monitoring the Mesencephalon for potential over stimulation:

- Pupil reflexes
  If pupils begin to fatigue (enlarge) this means the treatment is becoming too much and should be suspended for the moment.

- Pulse rate
  If pulse begin to increase, this means the treatment is becoming too much and should be suspended for the moment.

- Any spontaneous jerky or rapid movements can be a sign of over stimulation and treatment should be suspended for the moment.

- Increase in rigidity or decrease in range(s) of motion, or right-left imbalance following a therapy would suggest neurological fatigue, inappropriate timing, or inappropriate treatment.

3. Add to program those therapies (structural, neurological, nutritional) that changed the rigidity pattern. Needs will change as patient progresses, especially immune system treatments.

CONCLUSION:
The most elegant use of MMT is as a tool for expanding the functional neurological examination. Combining MMT with principles of clinical neurology brings the uniqueness of each patient's nervous system to life. Assessment and treatment procedures, when organized by the Quintessential Applications Clinical Protocol, allow for the most appropriate and comprehensive approach to restoring physiological and neurological functions, in all types of disorders, both pathological and functional.

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Pulse Points, Alarm Points, and Hidden Immune Dysfunction

Philip Cameron, D.C.

ABSTRACT:
The pulse points have long been used in AK as a diagnostic tool to help identify inhibited muscles and areas of stress within the body. This paper poses that positive pulse points with associated weak muscle that does not strengthen to its associated alarm point is an indication of a hidden switching pattern associated with stress in the immune system.

KEY INDEXING TERMS:
Pulse Points, Alarm Points, Luo Points, Switching Patterns, Immune System Dysfunction

INTRODUCTION:
During standard applied kinesiology evaluation many practitioners utilize the pulse points with therapy localization to determine if there are abnormalities within the acupuncture meridians causing the patient dysfunction. Traditionally when a pulse point is identified the next step is to locate the inhibited muscle associated with the pulse point. Once the inhibited muscle is identified the doctor will have the patient therapy localize (TL) to the associated alarm point of the weak muscle to see if the muscle will facilitate. If the muscle does not facilitate then the hunt begins to find which meridian point will facilitate the muscle, either the contralateral alarm point or the alarm point of the coupled meridian. If they facilitate the muscle treatment has been directed to the Luo point instead of the tonification point of the week meridian. It has been through my observation that when an inhibited muscle does not facilitate to its own alarm point that there is actually a hidden switching pattern associated with stress in the immune system.

DISCUSSION:
During evaluation of a patient using applied kinesiology, it is the goal of the doctor to reestablish ideal health and neurological function as quickly and efficiently as possible. A doctor utilizing applied kinesiology has many tools to determine where the patient has strayed from health and neurological function and then what can be done to correct the patient. I have been utilizing Dr. Walter Schmitt D.C., DIBAK, D.A.B.C.N., and Dr. Kerry McCord D.C., DIBAK, Quintessential Applications A(K) clinical protocol (QA) for the last four years and have enjoyed much success in helping my patients to achieve restored health and optimal function. Upon following the protocol on subsequent visits with patients many times I would start my evaluation and not have a weak muscle to test, so I would check switching patterns with K27 standard AK assessment, but if they were clear I would then check pulse points to try and identify an inhibited muscle. It was there that I would often find a weak muscle to begin my evaluation.

Knowing that there are many factors that can cause inhibition of a weak muscle I always go back and start my evaluation going through the QA protocol. When I had determined that there was no weakness of the muscles associated with the first eleven steps of the QA protocol and knowing that I had an imbalance in the meridian system I began checking to see where in the meridian system the inhibition was coming from. Not being a clinical acupuncturist and having complete command of the meridian system I was pondering questions as to what would cause the inhibition of some meridians to strengthen to the alarm point which to myself would indicate direct meridian stress, and

other patients whose inhibition would strengthen to the opposite contralateral alarm point or the coupled meridians alarm point. Through my QA training I have a sense of the connectedness and the neurological hierarchy of organization of the human body and this did not settle with me that the meridian system would not be connected to this organized neurological system as well.

It occurred to me while evaluating a patient that there was something abnormal about the symptoms of the patient that the muscle testing was not revealing to me. As I tested the pulse points and was able to identify an inhibited muscle that would then not strengthen to its own alarm point that I would check for a hidden immune system problem as Dr. Gangemi, D.C., DIBAK, had done similarly in his previous work on evaluating muscles that only weaken when the patient would TL to the neurolymphatic (NL) point associated with the muscle, aka a 51% muscle. I began by rubbing the visceral referred pain area associated with the spleen, thymus, and parotid gland to see if any of those points would facilitate the weak muscle as it would with a switching pattern. It happened that the inhibited muscle did then facilitate to the VRP stimulation. Correction was then made to the appropriate NL point in traditional AK procedure. After correction of the NL the muscle was then rechecked and there would be normal facilitation of the muscle, or it has also happened that the muscle remained inhibited but would now strengthen to its own alarm point.

PROCEDURE:
The following procedure is utilized when there is not appropriate facilitation of an inhibited muscle found through normal pulse point procedure to its own alarm point. If you are unclear of pulse point diagnostics please refer to Applied Kinesilogy Synopsis, 2nd Ed. by Dr. Walther.

1. Pulse point evaluation weakens a normally facilitated indicator muscle.

2. Evaluate for inhibited muscle associated with pulse point that caused inhibition of indicator muscle.

3. TL alarm point of inhibited muscle to see if it will facilitate muscle.

    A. Muscle will facilitate and treatment of the tonification point and other five factors of the inhibited muscle that facilitate that muscle can be done.

    B. Muscle will not facilitate to its own alarm point but will facilitate to contralateral alarm point or coupled meridian alarm point.

    C. Instead of following traditional procedure to treat the Luo point of deficient meridian, evaluate the VRP of Spleen, Thymus, and Parotid gland to see if there is facilitation of inhibited muscle.

4. Treat the NL of the VRP that facilitated the inhibited muscle.

5. Recheck inhibited muscle to see if it is now facilitated.

    A. Muscle is facilitated

    B. Muscle is still inhibited, TL alarm point associated with inhibited muscle.

        a. Alarm point facilitates, treat the tonification point of associated meridian, and any other of the five factors that facilitate.

b. Alarm point still does not facilitate, go back to step 3 and check for other immune system dysfunction.

6. Continue procedure until muscle is facilitated or facilitates to its own alarm point.

CONCLUSION:

Pulse point procedure has a long tradition in applied kinesiology diagnostic procedures. As neurological understanding of the human body continues to increase and our understanding of manual muscle testing as it relates to neurological function of the body is better understood it is imperative that our procedures evolve to be consistent with our new neurological understandings.

Following the QA protocol has been instrumental for myself to understand patient care and how manual muscle testing can truly unwrap the diagnostic puzzle of individualized patient care. Being efficient at determining where a patient's imbalances are is what enables a doctor to be a skilled physician and help to expedite the recovery and optimization of the individual. The subtle energies of the meridian system can often be a key to the deviation of an individual from optimal health. Utilizing these systems can be very revealing and the skilled physician that knows how it is playing together with the rest of the body's neurological and physiological processes offers a more thorough interpretation of the individual's health challenges and can utilize more conservative non-invasive treatments to restore optimal health to the patient.

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Symptomatic Improvement in an 18 Year Old Male with Plagiocephaly Complaining of Life-long Insomnia, Anorexia and Musculoskeletal Symptoms; Making the Case for Cranial Therapy

Shaun Craig, D.C.

Objective:
To describe the case of an 18 year old patient with plagiocephaly who was treated successfully using Applied Kinesiology cranial techniques.

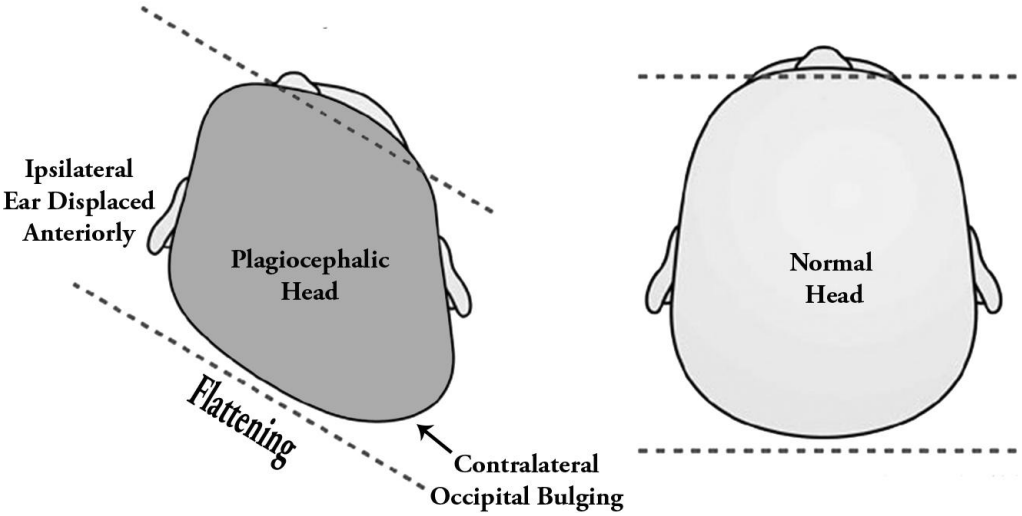
Clinical Features: Patient complained of lifelong insomnia, anorexia due to nausea immediately after eating, headaches, neck stiffness, thoracic hyperkyphosis, and low back pain.

Intervention AND Outcome: Four treatments, involving cranial therapy, foot corrections, illeocecal valve correction and hiatal hernia correction rendered this patient symptom free for 14 months. A mild return of insomnia occurred at 14 months which again resolved after treatment.

Conclusion: Cranial therapy is a safe therapeutic intervention that may be helpful for insomnia, nausea and a variety of musculoskeletal symptoms in patients with plagiocephaly.

KEY INDEXING TERMS:
Applied Kinesiology, Cranial Therapy, Chiropractic, Insomnia, Nausea, Headache, Thoracic Hyperkyphosis, Hiatal Hernia, Pineal Gland

INTRODUCTION:
The purpose of this paper is to present a case study of a patient who had a positive outcome with symptoms of chronic insomnia and anorexia using Applied Kinesiology Cranial technique. This patient also presented with plagiocephaly, which is defined as “a deformity of the skull in which one side is more developed in the front, and the other side is more developed in the rear”. It is hoped that readers will consider assessing the cranium in the treatment of chronic insomnia or anorexia in their patients, and consider assessing the cranium in patients who present with plagiocephaly. An argument for the continued use of AK cranial assessment and treatment will be provided in the discussion section of this paper.



"With Kind Permission from Scott Cuthbert, D.C."

Plagiocephaly has increased significantly in the last two decades. In 1992, the American Academy of Pediatrics recommended that infants be placed supine when sleeping, because prone sleeping has been correlated with sudden infant death syndrome (1, 2). One study reported that between 1992 and 1994, there was a fivefold increase in plagiocephaly in infants (3). A single study citing the prevalence of plagiocephaly since 1992, found occipital flattening in 15.2% of infants and 1.46% affecting the skull base and face (4). Yet another study, reported that plagiocephaly in teenagers is much lower, at 1.1% of teenagers (38.1% of these affecting the face), suggesting that most children outgrow the condition without intervention (5). Another component of plagiocephaly is neck muscle dysfunction, which was also found in 58% of infants with plagiocephaly. Interestingly, 36% of children with plagiocephaly were found to be developmentally delayed, as assessed on the Ages and Stages Questionnaire (6, 7). No research could be found on the association of plagiocephaly with insomnia or anorexia.

CASE REPORT:
An 18 year old male patient presents with a chief complaint of lifelong insomnia. He reports having significant difficulty falling asleep until 5:00 am. Once he is able to fall asleep, he sleeps very well. He has not been able to find a solution for his insomnia, exercise and caffeine avoidance were of no help. When asked about his digestion, he reports constant stomach upset (nausea) with every meal. He is only able to eat small portions of food, so he is underweight. He has been lactose intolerant since infancy, and consumption of dairy gives him significant stomach pain. He also complains of headaches four to five times per month, especially on the top of his head. He has neck stiffness especially after sleeping incorrectly. He gets low back pain every couple of days. He has bad posture with hyperkyphosis of the thoracic spine. He has foot, ankle and knee pain which were helped with orthotics provided by a podiatrist, but continues to feel like his ankles need to "pop". He reports that his cognitive faculties are good, mood is good, and denies any radicular pain, numbness or tingling. On a scale of 0-10, with 10 being severe, he rates his headaches a 4-5, neck stiffness a 4-5, and low back a 6.

EXAM:

POSTURAL: elevated left shoulder, moderately bilateral collapsed longitudinal arches, elevated right iliac crest, hyperkyphosis of the thoracic spine, alordosis of the lumbar spine, and left lateral head tilt. Mild to moderate cranial distortion with flattened right occipital region and protrusion of the right frontal bone, with corresponding facial asymmetry.

FEET: Foot corrections strengthen the psoas bilaterally and the left TFL.

CRANIAL: Assessed and treated according to AK challenge: Universal cranial fault, left temporal bulge, right parietal descent, spenobasilar expiration assist, sagital suture spread, and naso-frontal suture cranial corrections are performed. Turning the lights off creates global muscular weakness. This is corrected by spreading the intermaxillary and interpalatine suture, also referred to as "pineal gland" cranial fault correction.

THORACIC: Anterior thoracic fixation correction strengthens the middle and lower trapezius.

ICV: positive. There is negative therapy localization (TL) to adrenal and thyroid NL, or pelvic categories. He was prescribed ileocecal valve diet and foot rehabilitative exercises.

2nd Visit (8 days later): Patient reported significant improvement in his sleep and decreased nausea. He has not been having headaches, neck stiffness or low back pain.

EXAM: Pelvis musculature strong. Negative respiratory challenge, lights out testing, TL to stomach or ileocecal valve, aerobic testing and RMAPI testing all negative. C2 is posterior on the right. He was advised to slowly re-introduce fiber back into his diet.

3rd Visit (14 days later): Patient reported a return of his insomnia, nausea, neck and low back pain. He has not been having headaches.

EXAM:

PELVIS: Bilateral Cat II posterior ischium correction strengthens the psoas and TFL bilaterally.

FEET: Foot strike challenge positive bilaterally, foot corrections performed.

CRANIAL: Lights out testing is positive. Maxillary spread or "pineal gland" cranial fault negates. Positive TL to the adrenal NL. Insalvation of Drenamin negates. Positive TL to diaphragm and positive challenge for hiatal hernia, hiatal hernia correction corrects. Drenamin (SP) is given to be taken three tablets, three times per day.

4th visit (13 days later): Patient reports feeling much better, sleeping much better and has decreased nausea. Some of the nausea is mildly present.

EXAM: Positive TL to left TMJ, percussion of the left external pterygoid muscle corrects. Positive muscle stretch reaction to the psoas bilaterally, myofascial release corrects and negates a positive challenge for hiatal hernia. Pubic symphysis correction strengthens the adductors. Anterior thoracic

fixation correction. Negative TL to adrenal NL, ileocecal valve, diaphragm. Foot strike challenge is negative. Lights out testing is negative.

5th visit (14 months later): Patient reports that he has been doing well. He has been free of insomnia since his last visit (14 months ago) and just recently began having a return of his sleeping issues, knees, mid and lower back discomfort within the last couple of weeks. He also has had the return of nausea with eating but it has been mild.

EXAM:
Ocular lock is present and negated by C2 posterior on right and C3 posterior on left correction. Right internal frontal and sphenobasilar assist cranial corrections. Lights out testing is positive and negated by pineal gland cranial fault correction. Anterior thoracic fixation correction, and foot corrections. Positive TL to ileocecal valve. Insalvation of organic whole grain wheat flour creates global muscle weakness. This is negated by insalvation of antronex. He was advised to discontinue the consumption of wheat / gluten.

6th visit (2 weeks later): Patient reports that after his last treatment, he has been sleeping much better again, and no longer is having mid and low back discomfort. He is having some right upper back discomfort when drumming.

EXAM:
C6 is posterior on the right. Percussion to a trigger point in the right levator scapula insertion negates a positive TL. 1st rib is superior on the right. Negative foot strike test, pelvic categories are negative, lights out testing is negative, positive TL to the ileocecal valve. ICV correction. He is no longer having right sided upper back pain.

DISCUSSION:
Evidence for chiropractic treatment of insomnia is very limited. A systematic review of the literature on chiropractic and insomnia by Kingston et al. (2010) found no random clinical trials; there are a few anecdotal cases suggesting benefit from chiropractic care for insomnia (8).

Osteopathic manipulative study of cranial therapy has been investigated. A systematic review of the literature on the therapeutic effects of cranial manipulation (2011) found seven randomly controlled trials and one observation study. Positive clinical outcomes were reported for pain reduction, change in autonomic nervous system function, and improvement in sleeping patterns (9).

The best evidence available for cranial manipulation on sleep was performed by Cutler et al. (2005), titled “Cranial manipulation can alter sleep latency and sympathetic nerve activity in humans: a pilot study.” This study involved the CV4 (compression of the 4th ventricle) cranial correction to 20 subjects divided into treatment, sham and control groups. Muscle sympathetic nerve activity (MSNA) and sleep latency was measured. The cranial manipulation group showed both decreased MSNA and sleep latency compared to the control and sham group. They did not specify the underlying mechanisms behind the physiological changes observed (10).

Interestingly, a new study by Miana et al. (2012) may provide some insight to the underlying changes observed in the Cutler et al. study. This pilot study used quantitative electroencephalography (qEEG) and measured Alpha brain wave activity between CV4 cranial manipulation group, sham group and control group. Their results showed a significant increase in Alpha band brain wave activity in the

cranial treatment group. Alpha band brain wave is related to physical relaxation, peacefulness (as during meditation), awake and idle state (standby state) (11).
Ongoing research suggests a potential treatment for insomnia known as Cranial Electric Stimulation (CES). A tiny amount of transdermal electricity (microcurrent) is supplied to the cranium or ear lobes using electrodes. Although researchers' state that the reasons for CES improving sleep is unknown, they speculate that the application of CES modulates the production of central nervous system Alpha rhythms (12). This author speculates that CES and cranial manipulation may improve sleep by a similar (but speculative) underlying mechanism which increases Alpha brain wave activity.

Cranial manipulation has historically been a part of the osteopathic and chiropractic communities and has been used safely and successfully for many decades. Some doctors in the Applied Kinesiology community have voiced that cranial therapy is largely compensatory, meaning cranial faults arise due to other imbalances in the body, and the resulting cranial lesions can be resolved by addressing other nutritional, emotional and structural imbalances. This thinking has led some AK doctors to voice that they avoid cranial manipulation entirely, and has led some students of AK to avoid learning cranial assessment all together.

This particular case study can be used as an argument for the clinical usefulness and continued expertise in cranial assessment and treatment using AK methods. Not only did this patient present with cranial fault "body language" (plagiocephaly), but this patient presented with sleep disturbance, for which there is some published evidence in the medical literature that the application of cranial therapy can be helpful with sleep, making this procedure evidence based. More helpful, is that in this case, via cranial challenge, the presence or absence of the "pineal gland" cranial fault and "positive lights out testing" correlated directly with the patient's symptoms, suggesting that the presence or absence of this cranial fault can be used as another assessment tool for clinical progress in this specific patient.

Since other treatments were provided to this patient besides cranial therapy (ileocecal valve correction, hiatal hernia correction, thoracic correction, foot corrections, etc.), the "pineal gland" cranial fault could have been compensatory due to the dural tension created by these imbalances. But if the physician chose not to assess for cranial faults in this case, he or she would have been unaware of the correlation between the cranial fault and the patient's symptoms. Checking for and correcting this cranial fault allows the physician a greater understanding and clearer picture of the underlying pathophysiological mechanisms associated with the patient's symptoms, and provides another tool to track the patients progress.

CONCLUSION:
No firm conclusions can ever be drawn from a single case study. However, this case study clearly shows the benefit that cranial therapy had on this patient, as this patient went from a life-time of insomnia to sleeping normally for 14 months after just four treatments. This author hopes that this case study will be helpful for other physicians in the management of insomnia, nausea and plagiocephaly in other adults, and hopefully it will inspire continued investigation and study of AK cranial assessment and treatment.

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The Coccyx as Primary Involvement in Switching Patterns Identified via Pre-Test Imaging

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ABSTRACT:
Objectives: The purpose of this clinical procedure and case report is to offer quick and effective means to screen for coccyx dysfunction affecting the central nervous system via Pre-Test Imaging.

Clinical Features: 52 year old female with chronic neck pain, TMJ dysfunction, and leg length inequality presents noticing improvement in neck range of motion following exercises to release the tail-bone.

Intervention and Outcome: Chiropractic care determined by Applied Kinesiology Manual Muscle Testing is performed to correct Neurologic Disorganization. The patient involved had improved range of motion in her neck and jaw, as well as improvement in all identified dysfunctional associated muscles.

Conclusion: Pre-Test imaging is an effective screening procedure for identifying hidden Coccyx subluxations.

KEY INDEXING TERMS:
Kinesiology, Applied, Chiropractic, Coccyx, TMJ, Dysfunction, Neck Pain, Neurologic Disorganization

INTRODUCTION:
Neurologic Disorganization (ND) is the body's loss of its ability to adapt. (4) Being able to identify neurologic switching patters has long been recognized in Applied Kinesiology (AK) as having systemic relevance when addressing various dysfunctions of the patient. Pre-Test Imaging (PTI) is a useful screening procedure for identifying a coccyx subluxation that may be a primary source of dural tension on the central nervous system resulting in ND.

"Systemic structural factors (Kidney 27 (K-27), switching, cranial, Temporomandibular Joint (TMJ)) result in aberrant postural patterns that must be considered prior to addressing local problems… Attention to these structural factors has direct impact on the mesencephalic reticular formation affecting, among other things, pattern generation (flexion, extension, rotation, lateral flexion), TMJ muscle function, and autonomic expression." (10)

Our ability to adapt to environments, internal and external, is through a process of information transfer and translation which creates flexibility called fractal pattern organization. (4) "Non-linear dynamics enables these patterns to be identified in complex presentation, even when they are obscured by incoherence or sheer mass of indecipherable data. It discovers relevance in which the world discards as irrelevant using an entirely different approach and totally different methods of problem resolution from the ones the world is used to. It does this via critical point analysis. Critical point analysis is a technique derived from the fact that in any complex system there is a specific critical point at which the smallest input will result in the greatest change." (6)

Sensory integration (SI) is the neurological process that organizes sensation from one's own body and the environment, thus making it possible to use the body effectively within the environment. Specifically, it deals with how the brain processes multiple sensory modality inputs into usable functional outputs. Functional integration is the communication between specialized areas of the brain responsible for the processing of different sensory organs. (5, 9, 12) Furthermore, these specialized areas are not limited to specific identified sensory organs, but interpret multiple inputs to perceive what the body is experiencing in its environment. Nearly every activity that we perform is dependent on proper SI because the combination of multiple sensory inputs is essential for us to comprehend our surroundings. The earliest sensory input is the olfactory system. The earliest example of SI is the gustatory system developing with the olfactory system to ensure early humans could identify nutritional needs in foods, as well as avoid potentially harmful sources. As humans became bi-pedal, integration of visual, vestibular, and proprioceptive inputs became necessary to maintain postural balance. The breakdown of sensory integration may be called ND, or more commonly known as Sensory Integration Dysfunction (SID).

SID is broken down to three main types. Type one is modulation disorder, such as cravings or behavioral patterns resulting from too much or not enough sensory input. Type two is a sensory based motor disorder, which is muscle dysfunction due to de-afferentation. Type three is a sensory discrimination disorder characterized by postural control problems, lack of attentiveness, and disorganization.

Discoveries of sensory integration began in the 1930's when Wilder Penfield developed the Homunculus during surgical procedures to treat epileptic seizures at the Montreal Neurological Institute. He demonstrated that 30-40 percent of the nerves in the body are related to the face and head. (2, 11, 12, 13) Thus, imbalances in the TMJ may impact the functional integration of the sensorimotor and motor cortices, thus creating SIDs labeled ND in AK.

DISCUSSION:

Muscles move bones which articulate with other bones, and in the joint space are mechanoreceptive nerve endings that send afferent information to the central nervous system resulting in a relay of efferent information to the muscles. ND is a systemic result of signaling errors affected by chemical, mental, and structural factors. Chemically we consider neurotransmitters, endocrine glands, and electron poising components. Mentally we consider right vs. left brain, emotional neurovascular imbalances, learning disabilities, and K-27. Structurally we consider cranial faults, Pitch Roll Yaw Tilt (PRYT), pelvic categories, cloacals, proprioceptors, ocular lock, one eye open one eye closed, hyoid, gait, feet, and TMJ. (1) In addition, I would like to consider the roll of a coccyx subluxation influencing the TMJ as it has a Lovett Brother relationship to the sphenoid bone, as well as the effect the TMJ has on the central nervous system as a tension up-take mechanism for the dural sheaths. (5)

One author's basic spinal flowchart begins with addressing pelvic categories and their related cranial faults, then moving into sacral dysfunctions and gait mechanisms. The flow ends with nutritional therapies in relation to the structural corrections. (7) Another author's clinical protocols start with addressing systemic nutritional deficiencies then systemic structural factors including immune system Chapman's reflexes, K-27 switching patterns, TMJ related cranial faults, as well as common cranial faults. (10) However, TMJ imbalances uncorrected will create the return of already corrected cranial faults as soon as the patient chews, grinds, or swallows. Muscles move bones, and the muscles of mastication exert great force upon the cranial joints, impacting cranial motion with each phase of respiration. Therefore, correcting the muscular dysfunction systemically may be more beneficial to correcting the cranial fault, which may be a cause of ND.

Schmitt has described a patient that was able to regularly and predictably "beat" him in the muscle test. This patient shared with Dr. Schmitt that what he was doing was imagining the muscle being tested in his head. This created a temporary facilitation of that muscle. Dr. Schmitt went on to discover this no longer occurred after appropriate cranial faults were corrected. This screening procedure labeled PTI: a screening test for cranial faults is step eleven in QA clinical procedures under Systemic Structural Factors.

PTI is performed by first identifying relevant muscle inhibitions via history, posture, gait, pulse points, or Temporosphenoid Line (TS Line). The patient then imagines the muscle being tested while the clinician tests the already identified dysfunctional muscle. If the muscle facilitates, normalizing function, this is a positive finding suggesting the patient has some cranial fault that may be causing SID or ND. (10)

It is now up to the physician to identify cranial fault indicators using standard AK methods of diagnosis. If one or more cranial indicators are found, check the muscles of mastication. This is done first without therapy localization (TL) to the TMJ with the mandible in all positions against an indicator muscle (IM). The procedure may be repeated again with enhanced TL to the TMJ. (3) Next, cross TL any dysfunctional positions of the mandible found to the coccyx. A two-handed TL to the coccyx is recommended, without touching the hands together. If the IM re-facilitates, or the TMJ findings are negated, then TL the coccyx by itself. The coccyx may or may not have TL'd prior to this evaluation. (5) If inhibition of the indicator muscle occurs it would then be appropriate for the physician to also check the coccygeus, iliococcygeus, and pubococcygeus muscles for proper function. These muscles make up the pelvic floor and are instrumental in respiration. Furthermore, cross TL the positive coccyx TL to the stomach Neuro-Emotional Vascular points on the frontal bone to identify a related emotion. If the indicator muscle re-facilitates, identify the emotion and testing against any dysfunctional coccygeal muscles would be appropriate to identify a potential cause of dysfunction. (3) Finally, palpate and challenge the coccyx for proper means of correction.

After making the correction to the coccyx subluxation, utilizing encoded memory technique if relevant, recheck all findings. It is this author's experience that all previous mentioned findings at this point will no longer be present including any coccygeal muscle dysfunction, muscles of mastication dysfunction, cranial indicators, muscles related to the cranial dysfunctions, and the screening tool of PTI.

CASE STUDY:
A 52 year old female returned for routine care for chronic neck pain and limited range of motion associated with moderate degenerative disc disease and multiple region spinal joint dysfunctions. Her condition was complicated by leg length inequality possibly caused by left Tibia Epiphyseal Plate removed at the age of 12 to accommodate for a then leg length inequality. She also presented originally on hormone replacement therapies including estriol/estradiol topical cream, oral progesterone, and liposomal DHEA oral spray. Chiropractic manipulation and acupuncture treatments, as well as supplements based on standard Applied Kinesiology evaluation and history, were recommended.

Regardless of lack of compliance to dietary and supplement recommendations the patient's leg length became even in seated and supine positions after two treatments.

On her third treatment visit we addressed K-27 switching for the first time utilizing Ocular Lock and adjusting her sacrum. The following visit K-27 had a positive TL again and it was corrected again utilizing Ocular Lock, however this time adjusting her occiput bi-laterally.

After seven treatments her estrogen levels were elevated and she was advised by her prescribing physician to discontinue the topical estriol/estradiol. Throughout the course of treatment she reported minor, consistent improvement with her neck pain and improved range of motion.

On her ninth treatment visit she inquired on any relevance between her tail bone and neck. Two weeks earlier she had started with a new yoga instructor that was teaching spine supporting lessons focused on releasing the tailbone. After the first class she reported her neck and range of motion was the best ever and lasted for two days. She then reported she had an injury to her tailbone when snow skiing as a child. Follow up classes did not yield the same results.

Our evaluations that visit began with her posture which revealed a left Sternocliedomastoid Muscle (SCM) and left Gluteus Medius muscle (GM) inhibitions. Pulse point evaluation identified an inhibited popliteus muscle on her left. She did not have a positive TL to K-27. Her GM was tested for PTI using the steps detailed previously. PTI was positive. She then tested positive for a Cruciate (Inter-Maxillary) Suture cranial fault with superior digital pressure on the mid cruciate suture position of the hard palate weakening an IM.

Prior to evaluation of her TMJ, she reported chronic jaw pain and clicking, and expressed she did not want any treatment to her jaw for fear of aggravation. Palpation of TMJ revealed straight opening and right side of jaw closing before the left with clicking at the TMJ on closing bi-laterally, right greater than left. AK exam identified positive findings with her jaw open, TL to TMJ with jaw relaxed, and mandible held to the left with TL to the TMJ. TL to the coccyx negated the positive response to jaw opened wide.

Prone evaluation revealed a right hamstring inhibition and left coccygeus inhibition. Cross TL of coccyx to stomach NEV points suggested utilizing encoded memory technique. The emotion identified facilitated the left coccygeus muscle dysfunction. Palpation of the coccyx revealed a right superior, posterior malposition.

Correction of the coccyx was performed in a side posture position with favorable expectations. All identified and listed muscles facilitated including: left coccygeus, right hamstring, left GM, left popliteus, and left SCM. All AK positional and TL jaw findings were improved including: jaw wide open, TL to TMJ, and mandible to the left with TL to TMJ. She still had clicking in the TMJ. The Cruciate Suture cranial finding was no longer present. The patient reported improved range of motion of her neck. The treatment was followed by acupuncture for relevant findings.

CONCLUSION:

Pre-Test Imaging appears to be a relevant screening test to identify SID or ND caused by possible Dural Tension stemming from structural imbalances such as cranial faults, muscles of mastication dysfunctions, and coccyx subluxation. Correcting a coccyx subluxation and normalizing tension on the dural sheaths via the Filum Terminale relieves tension around the TMJ. Normalized tension and action in the muscles of mastication relieves restrictions and normalizes motion in the cranial bones, relieving the systemic impact structurally on the central nervous system. This is one example of critical point analysis in our closed kinematic chain called the human body.

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The Muscle Channels

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ABSTRACT:
Muscle channels are on the surface of the body originating at the extremities and contributing to the general circulation of Qi. They may be accessed via therapy localization (T.L.) to the pulse points in a gait position. The associated muscles weaken in a repeated muscle testing manner and corrected via the spondylogenic vertebrae to the Lovett brother of the associated point utilizing encoded memory protocol.

INTRODUCTION:
The muscle channels protect the body from trauma and govern the movement of the body. Symptoms may include pain, spasm, flaccidity and tingling. They do not connect with the internal organs; however the internal organs influence the muscle channels. In general they follow the course of the main channels and are divided into four groups of three channels.

The muscle channels may be accessed via therapy localization to the pulse points in a gait position. The muscles related to the muscle channel will not manual muscle test weak in the clear, but will weaken upon repeated muscle testing. Therapy localization to the spondylogenic vertebrae of the Lovett brother to the associated point vertebrae along with cross T.L. to the emotional neurovasculars for application of the encoded memory technic and correction of the subluxation in this manner will re-establish homeostasis in the muscle channel system.

DISCUSSION:
The muscle channels are on the surface of the body. They are directly connected to the main channels and form one of the main routes by which pathogenic factors may penetrate. The muscle channels do not circulate in the interior however the internal organs do affect the muscle channels.

All muscle channels flow from the extremities towards the top of the head, and in essence are the muscles overlying the main channels. They therefore relate only to striated muscle. Being integral to the channel system they participate in the circulation of Qi, and generally follow the course of the main channels. They are grouped into four channels of three yin\yang meridians of upper\lower extremities. The three yang muscle meridians of the foot are following the surface of the leg and connect with the eyes. The three yin muscle meridians of the foot connect with the genital region. The three yang muscle meridians of the hand rise to the forehead, while the three yin muscle channels of the hand connect with the thorax. There are four meeting points of the muscle channels: Stomach 3 for the three yang muscle channels of the leg (stomach, gall bladder, and bladder), Conception Vessel 3 for the three yin muscle channels of the leg (spleen, liver, and kidney), Gall Bladder 13 for the three yang muscle channels of the arm (large intestine, triple burner, and small intestine), and Gall Bladder 22 is for the three yin muscle channels of the arm (lung, pericardium, and heart). The convergence of the muscle channels is similar to the insertion of muscles.

The stomach muscle channel begins at the middle three toes ascending up the leg, up the thigh with a branch passing through the lower ribs to reach the mid-thoracic spine. The main branch converges in the genitalia ascending the abdomen and thorax reaching the supra-claviclular fossa; with one branch going to the jaw and another to the nose, zygomatic and orbit. The stomach muscle meridian connects with the muscle channels of the gall bladder, large intestine, and bladder. (Figure one)

The gall bladder muscle channel begins at the fourth toe ascending up the lateral portion of the leg and thigh. A branch from the mid-thoracic runs anteriorly to the anterior mid-thigh. A second branch goes posteriorly to the sacrum from the hip. The main pathway continues to ascend up the lateral side of the body, travelling to the anterior axilla with a third branch running through the pectoralis with both converging at the supra-clavicular fossa ascending up the neck running behind the ear with one branch reaching the outer canthus of the eye and the other continuing to the vertex of the head. The gall bladder muscle meridian connects with the stomach and bladder muscle channels. (Figure two)

The bladder muscle channel starts at the little toe, with one branch ascending the lateral leg and converging at the lateral posterior portion of the knee. The other branch ascends up the Achilles tendon splitting at the mid-calf with both ascending up the posterior thigh converging at the inferior buttock and continuing its ascension up the sacrospinalis with a branch diverging at the lower thoracic area with one branch going under the axilla and travelling across the chest converging with another branch which travels over the upper trapezius at the supra-clavicular fossa, here they split again with one branch ascending the face to the lateral aspect of the nose converging with the main branch that continued up over the occiput and then circling the orbit of the eye. Another branch that exited also from the mid-thoracic area travelled to the abdomen. The bladder muscle meridian connects with the muscle channels of the large intestine, small intestine, gall bladder, stomach, and kidney. (Figure three)

The spleen muscle channel starts at the large toe ascending the foot, along the medial aspect of the tibia and thigh crossing poupart's ligament and converging at the genitalia before ascending the abdomen and entering at the umbilicus converging and spreading throughout the chest with a branch going to the spine. The spleen muscle meridian connects with the liver and kidney muscle meridians. (Figure four)

The liver muscle channel starts at the great toe ascending the foot passing in front of the medial malleolus and ascending up the medial portion of the tibia and thigh converging at the genitals. The liver muscle channel connects with the spleen muscle meridian. (Figure five)

The kidney muscle channel starts at the under surface of the little toe travelling along the dorsum of the foot to the medial malleolus ascending the medial leg and thigh converging at the genitalia. A branch ascends the anterior spine and converges at the occiput. The kidney muscle channel connects with the spleen and bladder muscle meridians. (Figure six)

The large intestine muscle channel starts at the index finger travelling up the dorsum of the hand ascending the forearm, upper arm and converging at the shoulder. A branch goes to the scapula and to the upper dorsals. The main branch continues to ascend the neck where a branch converges at the zygomatic. The main branch ascends the lateral side of the head in front of the tragus crossing over the top of the head connecting with the opposite mandible. The large intestine muscle channel connects with the muscle meridians of the small intestine, bladder, and stomach. (Figure seven)

The triple warmer muscle channel starts at the ring finger ascending up the dorsum of the hand, wrist, forearm, lateral aspect of the arm and going over the shoulder to the neck and lateral side of the face. A branch runs from the angle of the mandible to the root of the tongue. The main branch ascends to the temple area to converge at the corner of the forehead. The triple warmer muscle channel connects with the small intestine muscle meridian. (Figure eight)

The small intestine muscle channel begins at the little finger ascending up the postero-lateral portion of the hand, forearm, medial elbow, and arm to the posterior axilla surrounding the scapula. A branch runs up the shoulder, ascending the neck converging at the mastoid process where a branch enters the ear. Continuing to ascend behind the ear and then descending to the mandible and further ascending to the outer canthus of the eye. The small intestine muscle channel connects with the bladder, large intestine, triple warmer, and stomach muscle channel meridians. (Figure nine)

The lung muscle channel begins at the thumb and ascends the thenar eminence travelling the antero-lateral aspect of the forearm, upper arm, entering the chest below the axilla converging at the shoulder and then emerging at the supra-clavicular fossa to enter the chest and after having spread through the heart and diaphragm. The lung muscle channel connects with the heart and pericardium muscle channels. (Figure ten)

The pericardium muscle channel originates at the middle finger ascending up the volar surface of the forearm, medial surface of the arm converging below the axilla descending and spreading over the anterior and posterior aspects of the ribs. A branch enters the axilla dispersing inside the chest and converges at the diaphragm. The pericardium muscle channel connects with the lung muscle meridian. (Figure eleven)

The heart muscle channel starts at the little finger ascending the medial hand, forearm, and arm entering the axilla travelling to the center of the chest while passing through the breast, descends to the diaphragm and ending at the umbilicus. The heart muscle channel connects with the lung muscle meridian. (Figure twelve)

The muscle meridians have many functions in the body. They protect the body from trauma, especially the internal organs. They maintain the positioning or relationship of bones to one another. This functions in both a mechanical and an energetic sense. They also therefore maintain the posture of the body and govern movement as well. The muscle channels help to integrate the exterior of the body to the main channels; as they are nourished by the main channels. This movement of Qi from the interior to the exterior and from the exterior to the interior is constant and is part of the muscle

channel function. Therefore the muscle channels contribute to the integration and flow of the Qi mechanism. The muscle channels do not connect directly to the internal organs however the organs do affect the muscle channels.

Pathology of the muscle channel systems may involve external factors such as wind, cold, and dampness along with either direct or indirect trauma, and/or overuse. Internal organ pathology may express itself as muscle meridian symptomatology. In traditional Chinese medicine, when yang is in excess one is unable to bend, when yin is in excess there is inability to extend. These may be thought of as contraction, stiffness, and pain versus slackness, flaccidity, and a dull ache. Tingling may be involved in either case. Specific muscle channel symptoms are listed as follows.

The stomach muscle channel may exhibit symptoms such as stiffness of the feet and/or ankle, swelling of the thigh, abdominal muscle imbalances which may lead to hernias, deviation of the mouth and inability to close one eye. The gall bladder muscle channel symptoms may include any knee symptom, pelvic muscle imbalance with sacral pain, neck pain, inability to open the eyes, and difficulty in moving the feet. The bladder muscle channel symptoms may involve neck pain with decreased range of motion, frozen shoulder syndrome, axillary pain, and opisthotonis. The spleen muscle channel symptoms may exhibit leg, knee, and thigh pain especially on the medial side. Genital pain and discomfort, pain in or around the umbilicus as well as thoracic pain. The liver muscle meridian may exhibit symptoms of genital pain and dysfunction, medial ankle, knee, and thigh pain. Kidney muscle channel symptomatology may include epilepsy, muscle pain along course of meridian, inability to flex and/or extend the spine and/or neck. The large intestine muscle channel symptoms may display frozen shoulder, and lack of cervical spine rotation. Triple burner muscle meridian symptoms exhibit pain of muscles that follow the path of the meridian as well as tongue spasms. Small intestine muscle channel symptoms may include axillary pain, tinnitus, ear pain, elbow pain especially the posterior portion, temporomandibular joint pain and dysfunction, as well as cervical pain and decreased range of motion. The lung muscle channel symptomatology may include shortness of breath, abdominal pain and muscular pain along path of the meridian. The pericardium muscle channel symptoms may display chest pain, breathlessness, and muscular pain along the meridian pathway. Heart muscle meridian may involve symptoms of muscular pain and dysfunction along course of the meridian.

Any involvement of the muscle meridians will cause pain and stiffness in muscles or groups of muscles. In traditional Chinese medicine the treatment may consist of massage, cupping, and/or acupuncture. Applied Kinesiology utilizes therapy localization to the pulse points as a portal of entry to the meridian system. This method will access the main channel pathways. Dr. Goodheart in his 1987 Workshop Procedural Manual described therapy localizing the pulse points in a body into distortion (B.I.D.) pattern or gait position to access the muscle channel system. Dr. Dale Anderson in the 1990-91 Volume II Proceedings of the International College of Applied Kinesiology described therapy localizing the convergent points (G.B. 13, G.B. 22, C.V. 3, and St. 3) and then the Ho points of the three meridians involved to find the one muscle channel meridian to be treated via a tapping

procedure to the involved points on the meridian. Further research and observation by this author has led to the development of the following protocol.

The main channels should be accessed, treated, and cleared first. The pulse points are then therapy localized in a gait position; one pulse point will T.L. if there is a muscle channel system involvement. One of the two alarm points will then T.L. in a gait position only; however the associated muscles will not manually muscle test weak in the clear but only upon repeated muscle testing protocol (aerobic/anaerobic type test). If the patient therapy localizes the spondyogenic vertebrae to the Lovett brother of the associated vertebrae then the repeated muscle testing weakness will be negated. For example: the left middle pulse point therapy localizes in a gait position, the alarm point for the liver muscle meridian therapy localizes in a gait position and the pectoralis sternal muscle tests weak upon repeated muscle testing protocol. The associated point vertebrae is dorsal ten, its Lovett brother is dorsal one, and the spondylogenic relationship is the atlas. Atlas therapy localization will negate the repeated muscle testing weakness of the pectoralis major sternal. The atlas therapy localization will usually be negated by cross therapy localization to the emotional neurovasculars (stomach/bladder Bennet points). Adjustment of the atlas utilizing encoded memory technic in this instance will re-establish homeostasis to the muscle channel system negating the repeated muscle testing weakness of the pectoralis sternal muscle and negating therapy localization to the left middle pulse point in a gait position. This is the basic protocol for clearing the muscle channels via Applied Kinesiology and chiropractic application. The two exceptions to this are the small intestine and bladder muscle channels. The associated points for both these meridians are on the sacrum with the Lovett brother being the occiput. Adjust the occiput with encoded memory application in these two particular instances.

An interesting observation to be noted is that an omega 3/omega 6 type oil placed on the tongue will negate the weakening of the associated muscle/meridian repeated muscle testing weakness pattern however, after proper correction of the subluxation/encoded memory complex this same oil will now weaken the affiliated muscle. The appropriate convergent point (G.B. 13 for the upper extremity yang meridians, G.B. 22 for the upper extremity yin meridians, C.V. 3 for the lower extremity yin meridians, and St. 3 for the lower extremity yang meridians) when therapy localized will negate the repeated muscle testing weakness pattern.

CONCLUSION:

The muscle channels are another meridian system protecting the body from trauma in both a mechanical and energetic sense. They maintain the posture and govern movement of the body and contribute to the integration and flow of Qi. The muscle channels do not connect with the internal organs but the internal organs affect the muscle channels. Muscle channel symptoms always involve muscles or groups of muscles and may include pain, contraction, flaccidity, inability to flex/extend, and/or tingling.

Therapy localization to the pulse points in a gait position will access the muscle channels. The involved alarm point will only therapy localize also in a gait position with the affiliated muscle weakening in a repeated muscle testing fashion. Adjustment of the spondylogenic vertebrae to the

Lovett brother of the associated vertebrae utilizing encoded memory application will clear the muscle channels helping the body re-establish homeostasis.

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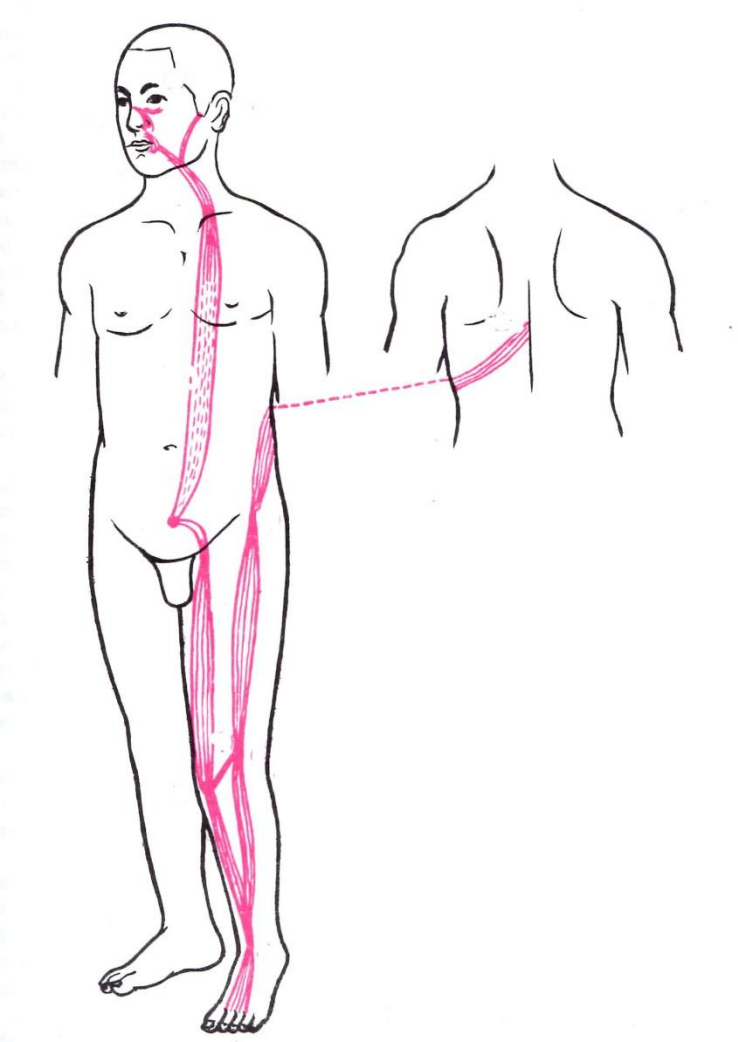
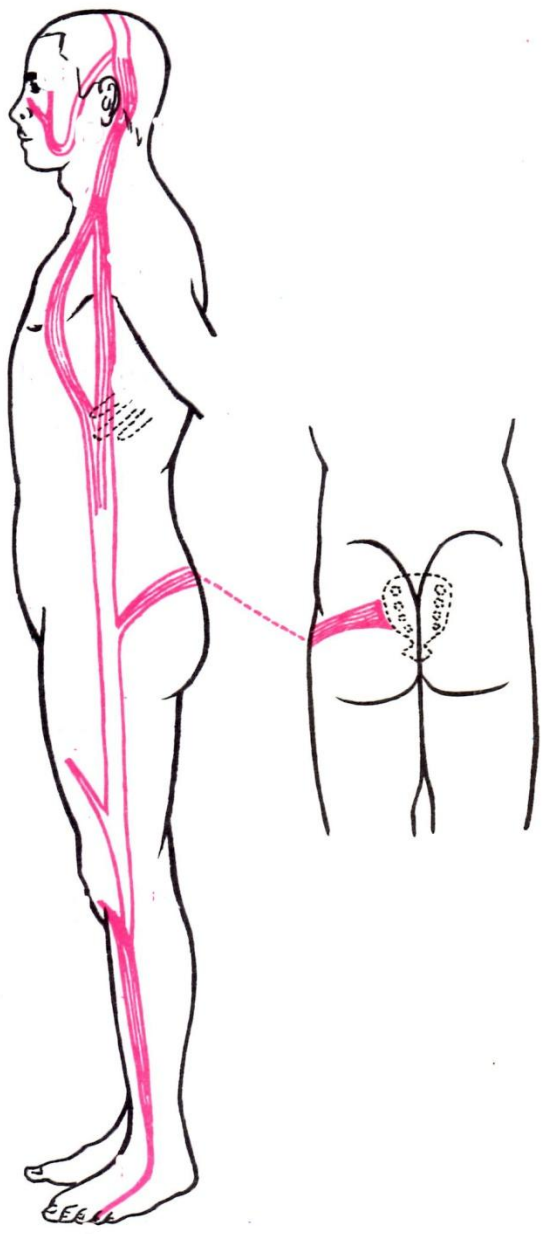
Figure 1



Stomach Muscle Channel

(after Xinnong)

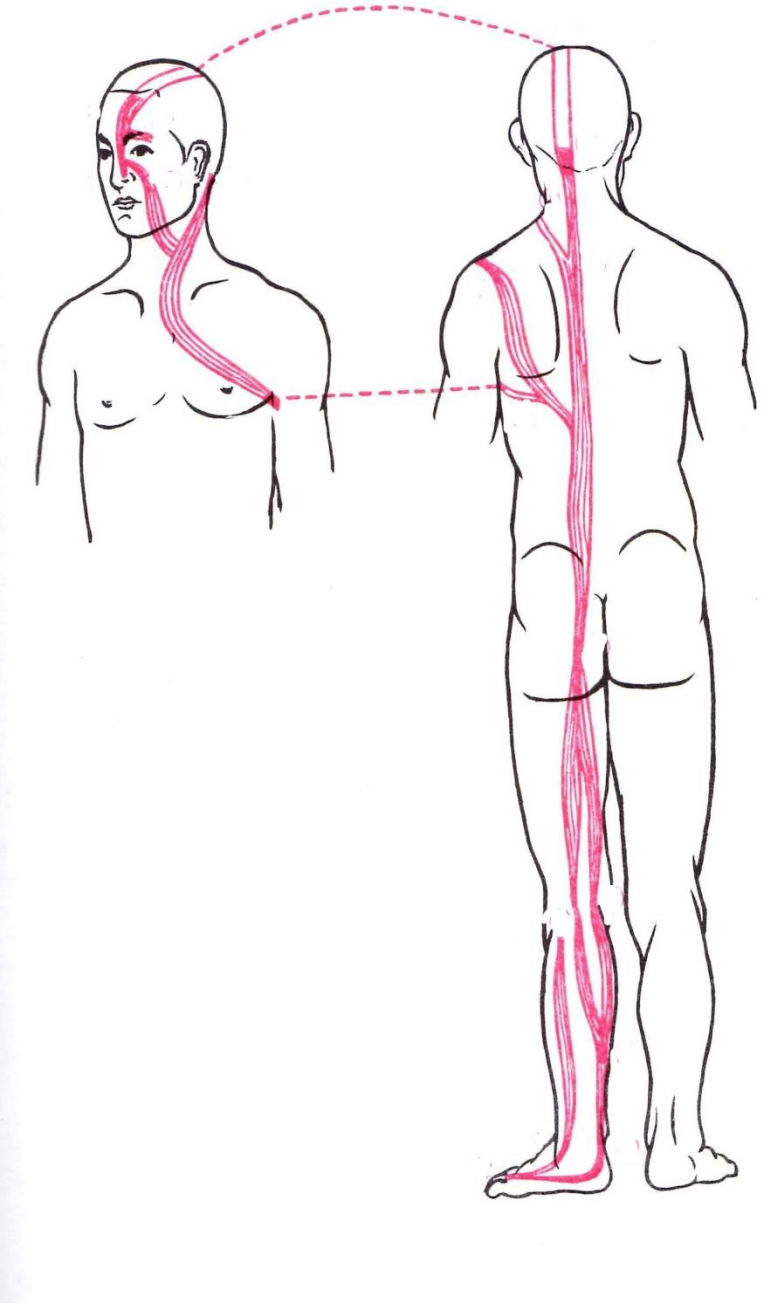
Figure 2



Gall Bladder Muscle Channel

(after Xinnong)

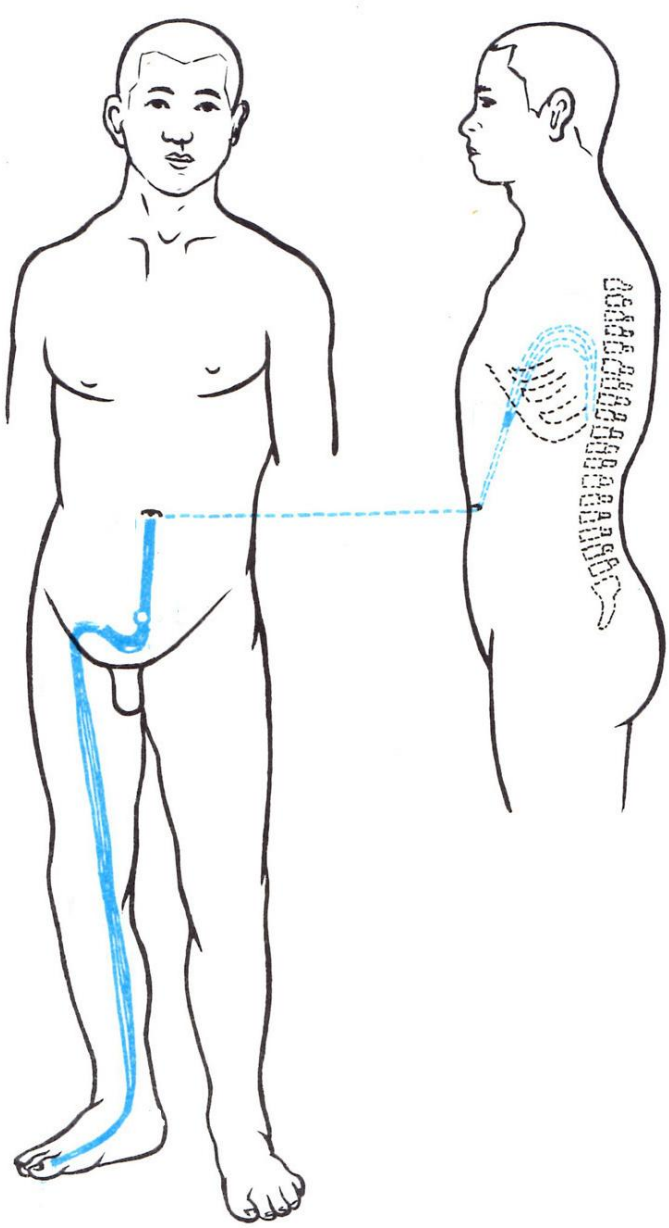
Figure 3



Bladder Muscle Channel

(after Xinnong)

Figure 4



Spleen Muscle Channel

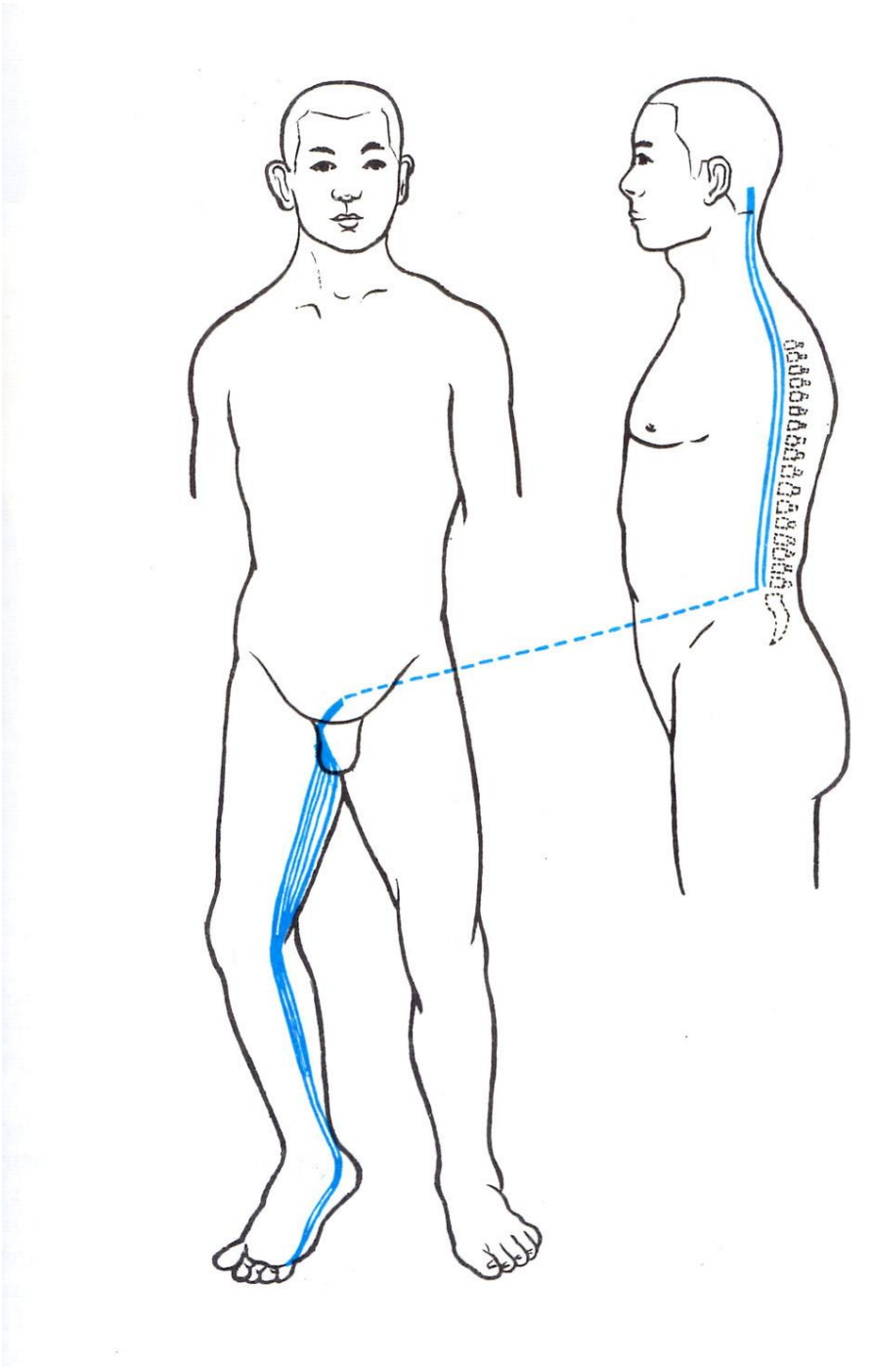
(after Xinnong)

Figure 5

Liver Muscle Channel

(after Xinnong)

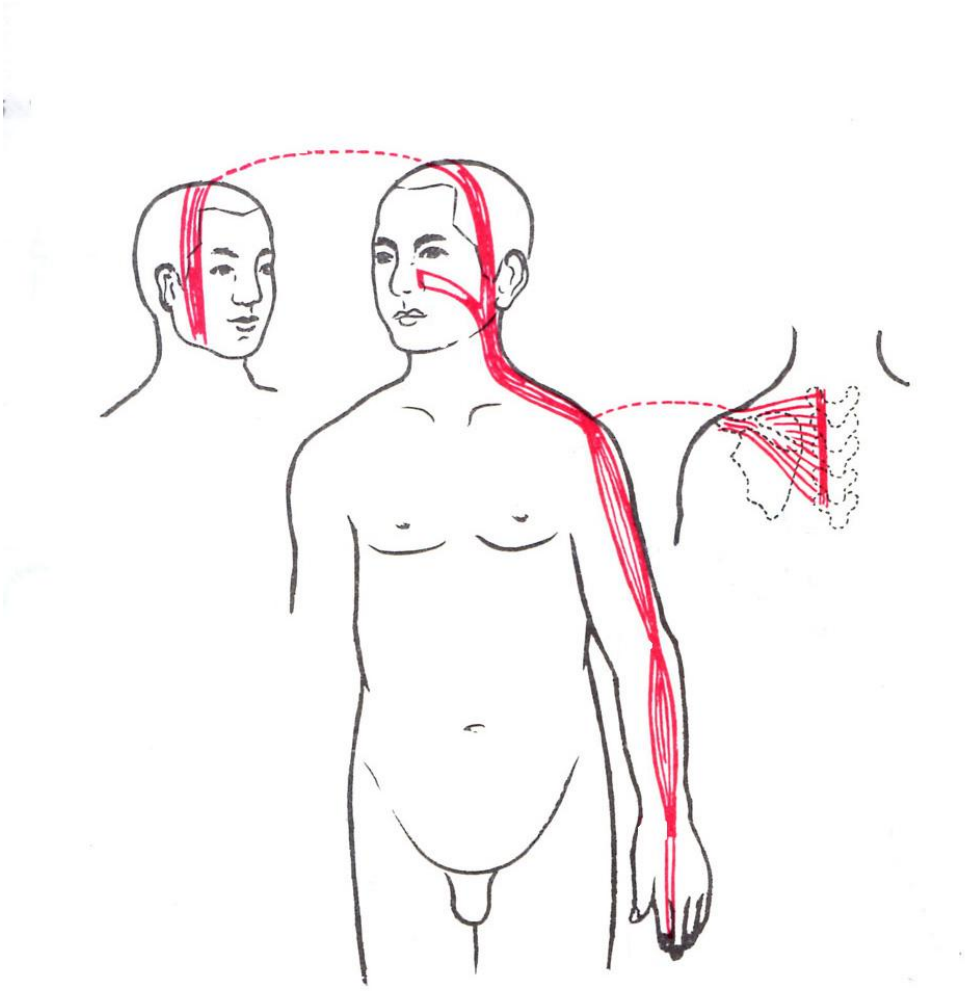
Figure 6



Kidney Muscle Channel

(after Xinnong)

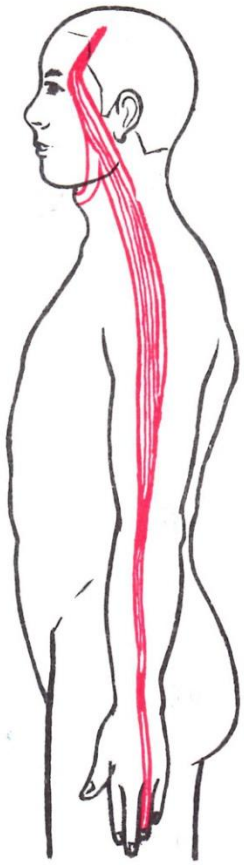
Figure 7



Large Intestine Muscle Channel

(after Xinnong)

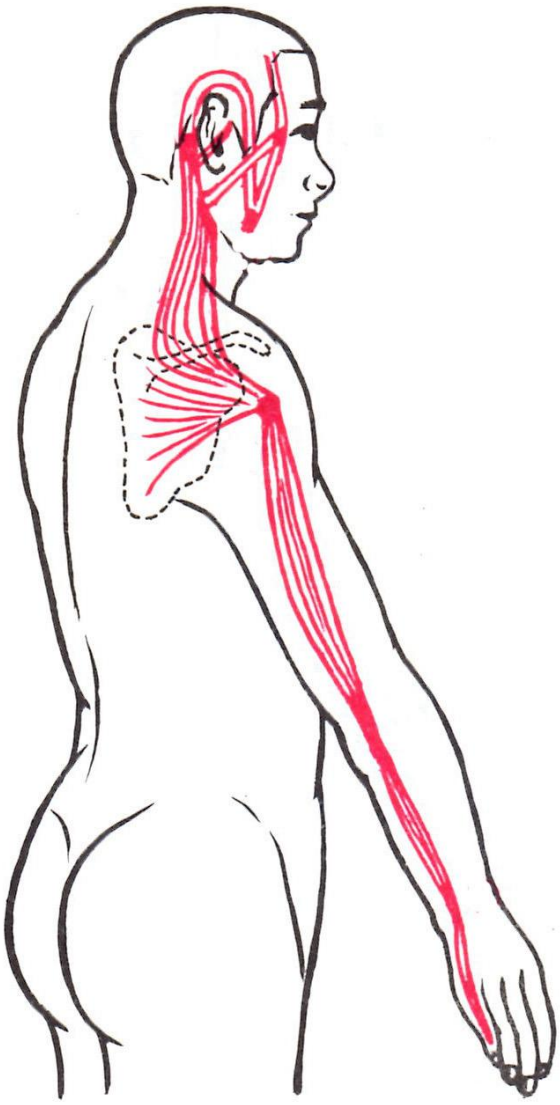
Figure 8



Triple Warmer Muscle Channel

(after Xinnong)

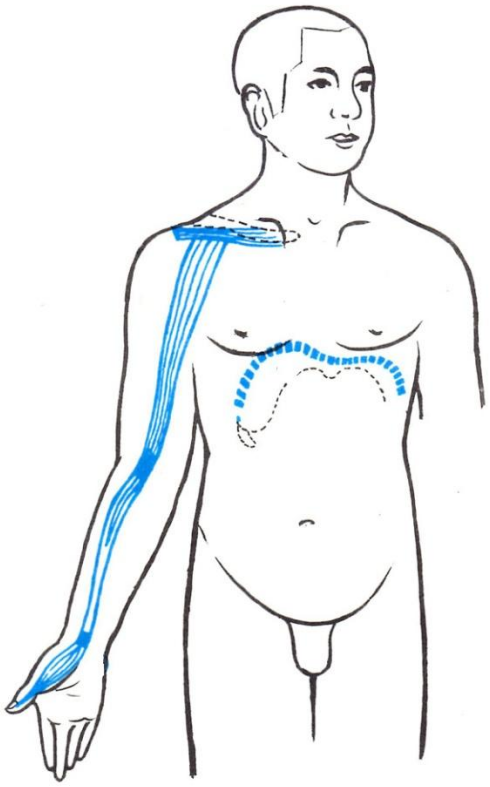
Figure 9



Small Intestine Muscle Channel

(after Xinnong)

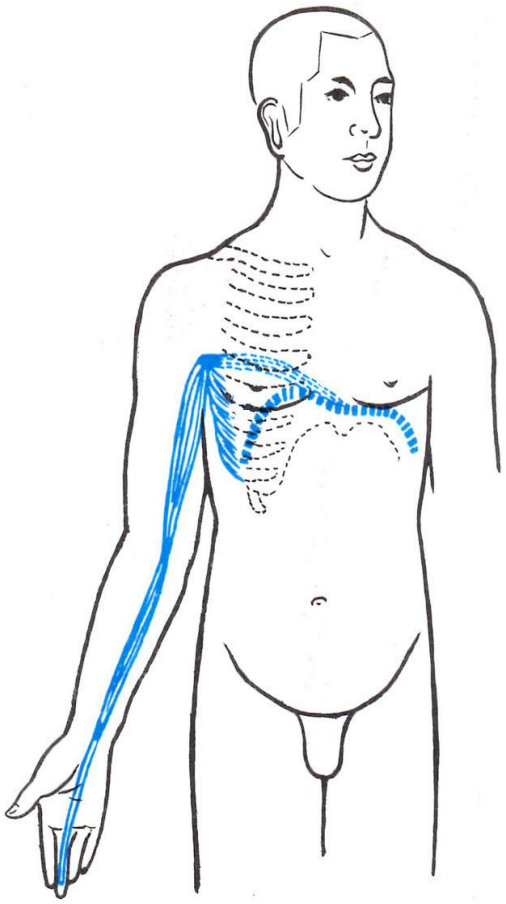
Figure 10



Pericardium Muscle Channel

(after Xinnong)

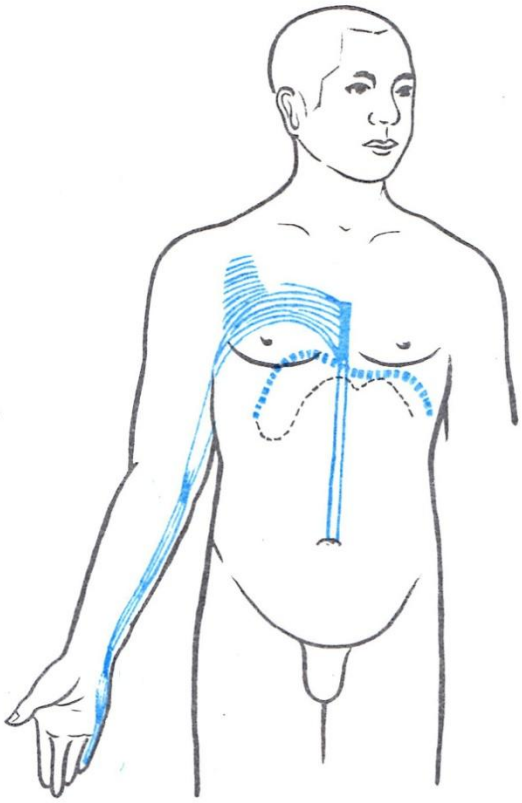
Figure 11



Lung Muscle Channel

(after Xinnong)

Figure 12



Heart Muscle Channel

(after Xinnong)

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The Real "Great Pretender"- The Iliocecal Valve and Digestive Stasis Secondary to Hypochlohydria - A Case Study

Tyran Mincey, D.C., DIBAK

ABSTRACT:
Objective is to share a case history of an Ileocecal valve syndrome and its ability to mimic hypoacidity in the stomach. Many patients present with digestive complaints. Over the years several patients have presented with conditions that are unexplained by conventional laboratory testing, analysis, and standard medical examination procedures. 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

INTRODUCTION:
Hypoclorhydria is a major complaint levied by patients and it seems to involve several mechanisms. It may be routine for a clinician to locate this problem who is properly trained.

The digestive tract contains several functional valves; these include Iliocecal, Cecal colic, Valve of Houston, Cardiac sphincter, Lower esophageal sphincter, and the anus.

Medically the most common treatment for hypochorhydria is antacids, and h2 blockers and proton pump inhibitors. Only those trained to understand that functional illness precedes poor function and then leads to pathology actually look for causes of hypochlorhdria. One such presentaton is the relationship between ICV dyfunction and hypochlorhydria. This condition has many consquences gone unaddressed such as lack of calcium absorption, and sublincal malnutrition scenarios, and mineral deficiencies.

Jargon Relating to Ileocecal Valve and Hypochlorhydria:
The Ileocecal valve, also abbreviated “ICV”, is located at the junction of the ileum and cecum. It has been demonstrated to be a functional valve in that 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 inserts 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 diagnositic 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 28 year old dancer presented with an acute right lower quadrant pain which was debilitating. Using standard medical physical examination and abdominal examination no abnormalities were detected, except for tenderness at Mcburney's point which was rebound. TS line revealed a conditionally inhibited, right tensor fascia lata which strengthened on TL to the stomach. The patient also had a slight reduction the second the valve was pulled closed (pulled supero-medially). As per Walther in the Applied Kinesiology Synopsis standard reflexes for an open ICV were tested and in this case all were active, these were treated with hard digital pressure, or other standard methods. These included neurovascular, lymphatic, and the acupuncture meridian connector point, bladder 58. The patient was then put on Nutri-West's Hypo- D - three per hour this strengthened the TFL on gustatory challenge. She was then given inpatient status and monitored for two hours. During this time her symptoms decreased. At the conclusion of the visit, she was able to ambulate and standup straight without pain. The patient fully recovered within a one week time period.

DISCUSSION:
There are many different spin offs of standard Applied Kinesiology management of an ileocecal valve syndrome. Our management consisted of following standards set by the ICAK per Walther's Applied Kinesiology Synopsis. The standard indicator muscle is the right tensor fascia lata; the reflexes used were also standard.

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. These include disorders of the right ovary, mittlschmitz, appendicitis, 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, unexplained halitosis, bowel movement appearance irregularities, small stool strands, balls, dark circles around eyes, estrogen dominance, extreme fatigue, croup, migratory gas pains, and headache. These problems must be considered and valve dysfunction should be ruled out after a search for pathology is fruitless. In the case of this patient, a proper and searching in exam was performed looking for rule out appendicitis, since the no fever nor sign of infection she was kept for monitoring and was instructed if her symptoms returned to visit the ER. However, AK methods should be used first prior to more aggressive care being performed. Frank pathology had been completely ruled out. Part of all work-up should have included an evaluation by an applied kinesiologist or an appropriate referral to one, after a life threatening illness was ruled out. Having an early examination for ileocecal valve involvement is a practical approach which will save thousands in unneeded lab testing.

CONCLUSION:
The stomach and hypoacidity has the ability to cause 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.

Acknowledgements are made to Nutri-West, Integrated Healthcare of Montclair LLC., and The ICAK.

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The Treatment of Recurring Vertebral Fixations Through Use of Intraosseous Subluxation Therapy and Injury Recall Technique

Skylar Bakko, D.C and James Hogg, D.C., DIBAK

ABSTRACT:
This paper discusses the identification and treatment of intraosseous subluxations that may be causing recurring vertebral fixations. Standard treatment for intraosseous subluxations vs. treatment with Injury Recall Technique (IRT) is discussed. A protocol for identifying and treating patients is presented.

KEY INDEXING TERMS:
Vertebral Fixations, Intraosseous Subluxation, Reoccurring Vertebral Fixation, Injury Recall Technique, IRT, Hologramic Subluxation.

INTRODUCTION:
Vertebral fixations as defined in Professional Applied Kinesiology involve a locking together of three or more spinal vertebrae, including at least two motor units. Consequences of this type of vertebral fixation include disc degeneration (due to reduced movement thus reducing "inbibing" by the discs) as well as a predictable pattern of, usually bilateral, muscle inhibition. (1) The purpose of this paper is to introduce a clinical finding for the treatment of recurring vertebral fixations and/or vertebral fixations in general. The finding is an intraosseous subluxation, commonly found immediately underneath a vertebral fixation, as a cause for the vertebral fixation. Treating the intraosseous subluxation has been shown to clear the vertebral fixation and often clears other vertebral fixations that were present before treatment, along with previous bilateral muscle weakness from the fixation. The purpose of treating the intraosseous subluxation is to not only clear an existing vertebral fixation and bilateral muscle weakness, but to create a more long lasting treatment for the fixation. Several combinations of treatment for the intraosseous subluxations were found to be successful. First, treating the intraosseous subluxation as described in the Applied Kinesiology Synopsis by David S. Walther was used (1). Some intraosseous subluxations returned, along with the original vertebral fixation. Treatment of the Bladder meridian was found to be effective with some of these recurring intraosseous subluxations. Injury Recall Technique (IRT), first presented by Schmitt (2, 3), was also applied to the involved vertebra in conjunction with intraosseous treatment. Finally, it was observed that IRT alone would clear out the existing intraosseous subluxation as well as the vertebral fixation above.

MATERIALS AND METHOD:
The approach to correction of the intraosseous subluxation presented here will be by the use of Injury Recall Technique (IRT) first presented by Schmitt (2, 3). For the purpose of this paper, first, the vertebral fixation shall be observed. Vertebral fixations can be easily identified by specific bilateral weak musculature patterns and spinal challenge using a previously strong muscle as noted by Walther (1). An intraosseous subluxation can most often (greater than 90%) be found on the vertebra located directly beneath the fixation. This can be identified by using a challenge of approximation or separation of the vertebra's spinous and transverse processes followed by inhibition of a previously

facilitated indicator muscle (1). The use of mechanoreception to dampen nociception by brushing the skin over the vertebra below the fixation immediately after a positive fixation challenge will usually negate the positive challenge of the fixation. This would indicate that a nociceptive source underneath the fixation is related to the positive challenge. Then proceed to challenge for an intraosseous subluxation to identify the cause of nociception. Now, instead of correcting the intraosseous subluxation as indicated in the Synopsis, the next step is to identify the need for IRT over the area of the intraosseous subluxation. The authors have found that the need for IRT will be over the area of either transverse processes of the intraosseous subluxation. Quoting Schmitt, "In standard IRT the suspect injury area is stimulated either via pinching or other nociceptive stimulation or therapy localization. This stimulation is followed rapidly by a cephal tug on the ipsilateral talus. If this procedure results in brief inhibition of a previously facilitated skeletal muscle (e.g. the pectoralis major clavicular) on manual muscle testing, it is considered to be a positive test for a persisting subliminal withdrawal reflex to a former injury with all the associated neurological consequences. A variation on this test for injuries superior to the clavicle involves extension of the neck at the atlanto occipital joint by the patient immediately following stimulation of the suspect injury area substituted for the talus pull above (4)."

DISCUSSION:

The presence of an intraosseous subluxation underlying a vertebral fixation seems to hold true for most (greater than 90%) fixations, regardless of their location. The authors have found that treating intraosseous subluxations using IRT alone helps to not only clear interference from the intraosseous subluxation itself, but also interference from the vertebral fixation as well as restricting the frequency of recurrence of the vertebral fixation. We have observed that many patients with vertebral fixations, and especially patients with chronic vertebral fixations, enjoy longer lasting results with the correction of the intraosseous subluxations, especially when IRT is used as the treatment. Our hypothesis is that the micro-compaction of the intraosseous subluxation causes a nociceptive, "subliminal withdrawal reflex," signal to the brain, which would be consistent with mechanoreception to the area over the intraosseous subluxation negating the muscle inhibition caused by the fixation challenge (4). Treating the intraosseous subluxation using IRT not only clears the vertebral fixation but may also clear the remaining spinal findings for that present visit. I (S.B.) have found it beneficial, if time permits, to check for the presence of other fixations and vertebral subluxations before the treatment of the intraosseous subluxation. I then have often observed the treatment of an intraosseous subluxation clears out all my previous spinal findings found using manual muscle testing.

OVERVIEW:

I. Testing

I. A. Locate weakness in a set of indicated fixation muscles

B. Challenge area of spine indicated by weak muscles to locate fixation

C. Re-challenge positive fixation and swipe skin over vertebra just beneath fixation (Mechanoreception)

1. If mechanoreception negates positive challenge, challenge for intraosseous subluxation at the level of mechanoreception by spreading or approximating the spinous to the transverse processes

D. Check for IRT on intraosseous subluxation

1. Once intraosseous subluxation is confirmed, stimulate area of skin over one transverse process of the intraosseous subluxation by lightly pinching, followed by:

a. Cephalad tug on ipsilateral talus if vertebra is inferior to C7

b. Having patient extend head if vertebra is superior to T1

c. Immediately test strong indicator muscle

1) inhibition indicates need for IRT at that level

d. If no inhibition of strong muscle is noted, repeat above procedure with pinch challenge over opposite transverse process area

II. Treatment using IRT

A. Repeat Stimulation

1. Repeat stimulation (pinching) over area of skin that produced a positive IRT challenge, and then perform a light caudal tug on the ipsilateral talus for vertebrae inferior to C7

III. If subluxation is above the level of the clavicle, perform same stimulation (pinching) over a transverse of the intraosseous subluxation and passively flex the occipital-atlantal junction gently two or three times for vertebrae superior to T1.

CONCLUSION:

Further investigation as to the original cause of an intraosseous subluxation is needed. One hypothesis is that intraosseous subluxations possibly cause instability in areas of the spine and the response of the body is to stabilize by 'fixating' the area above the intraosseous subluxation. Treating the intraosseous subluxations with IRT, only, as opposed to just an adjustment seems to help restore the micro compacted vertebra and thus re-stabilize that area of the spine. The authors have found that performing the adjustment alone to the intraosseous subluxation, in some cases, doesn't have the same lasting effect as opposed to using IRT. This technique can, therefore, provide another building block to the 'bottom-line' cause of vertebral fixations.

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Two Important Tips to Help Ensure Proper Muscle Testing

Harvey Lang, D.C.

ABSTRACT:
Presented in this paper is a method of refining muscle testing on a basic level. This enhancement will eliminate many false negatives.

KEY INDEXING TERMS:
Muscle Testing, False Negative, Eye Gaze, Respiratory Phase

INTRODUCTION:
Do you ever wonder why there is never 100% correlation between doctors when they muscle test people; or do you wonder why, when they see a patient and they appear to test fine, the patient continues to have symptoms of what we thought we corrected one or two visits ago. [1]

In diagnostic applied kinesiological muscle testing [2], the patient is instructed to try to "beat" the tester in the muscle test. After some experience doing this (and sometimes after almost no experience doing this), the patient very often does one of two things that will cause a false negative. If a patient looks up and/or breathes in during the test, if there would have been a positive muscle test, e.g. involving an allergen or subluxation, it will produce a false negative (in other words, the muscle remains "strong"). The patient has been instructed in a muscle test "contest" and unknowingly subverts the process by either looking up or breathing-in.

Sometimes we just can't find anything to fix; very often, after treating a patient, they will test clear immediately afterwards. However, even after a few weeks of regularly checking the patient, whether checking for a subluxation or corrected allergy recurrence, all muscle tests are negative, yet the symptoms persist. It seems we have won the battle but lost the war. Where is the discrepancy? How is it that the patient tests clear and then positive indicators reappear later? Was the patient not treated properly during the first visit? It is very likely that the patient was not tested correctly. Over the years, I have been able to pinpoint in my work with patients exactly where the error in testing lies. The problem lies in our basic way of muscle testing.

We must be sure that the patient doesn't look up or breathe-in while testing them!
One must tell them not to breathe-in or look up or if need be tell them to "breathe–out and face their eyes down!" This will eliminate many false negatives. Be sure to tell the patient to not to flex their neck in order to accomplish their eyes gazing downward as this will very often cause the patient's eyes to move upward.

Eye gaze as well as respiratory phase plays in influential role in the efficacy of diagnostic muscle testing.

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Division III

Constructive Review Papers

Evaluating the Foundational Principle of a Chiropractic Technique, "The Prevalence of Vestibular Reflexes in Our Practice"

John Erdmann, D.C., DIBAK

ABSTRACT:
One of the foundation principles of Neural Organization Technique (N.O.T.), by its founder Carl Ferreri, D.C. is the presence of retained primitive reflexes within the Vestibular Reflexes (VR). He believed that a neural deficit within the vestibular reflex system can be readily screened using standard kinesiological methods of gait analysis and states that its presence is approximately 65-70% in the general population. We hope to evaluate this hypothesis and perhaps shine some light on how much of a priority the VR system should be in our Applied Kinesiology (AK) assessment.

INTRODUCTION:
In a detailed paper recently submitted by Dr. Richard Belli, he describes the components of the vestibular mechanism in its relationship to balance, posture, and spinal function. This paper, extrapolates further the role of the VR from contributions of Dr. Ferreri and his observations in an Applied Kinesiology method he called Neural Organization Technique where uniformity of gait muscles will inhibit when the VR system is present.

This paper was born out of a discussion between Dr. Corwin and Dr. Erdmann. Dr. Corwin practices N.O.T. and is the current President of the N.O.T. Organization. Dr. Erdmann has taught the 100-Hour Basic AK Course and has a diplomat in Applied Kinesiology and Clinical Nutrition. Dr. Corwin has experienced this estimate of 65-70% of deficit primitive reflexes that make up the VR in his private practice.

To test this hypothesis, an AK practitioner (Dr. Erdmann) will evaluate a random sample of ten patients from his practice and a random sample of ten patients from Dr. Corwin whom shares the same office location before their treatment, but seen before, and ten non-patients. If the proposed hypothesis is true, we will find in the non-patient population somewhere at 65-70% to have a gait issue. And with Dr. Erdmann's patients who haven't had any specific VR treatment some slightly less but significant amount of deficit, whereas, Dr. Corwin's will not.

Gait evaluation for the purposes of this paper will incorporate the evaluation of arm swing during a gait position. Using the primary muscles of arm swing we will be using standard manual muscle testing of: Pectoralis Major Clavicular (PMC) Deltoid group (DG) and Anterior Deltoid (AD). The major premise is that a gait issue will inhibit all of these muscles unilaterally in a neutral stance and then strengthen with the appropriate gait step.

RESULTS:
A random pre adjustment of ten of Dr. Corwin's patients found zero gait issues, one patient had a weak bilateral PMC.

A random pre adjustment of ten of Dr. Erdmann's patients found one gait issue and two non-reactive AD and DG ten random non-patients tested found five to show positive gait test and four others had some weakness but not strengthening to gait and one non-patient had all strong muscle.

The Muscles used:

Pectoral major clavicle (PMC)

Deltoid Anterior (AD)

Deltoid group (DG)

Right and left tested

If weak tested in a gait position

CONCLUSION:

The first conclusion is that this is a preliminary study with a small sample size that would prove interesting if the same data proved out on a larger and more detailed scale.

The initial suggestion is that 50% of this population had a gait issue and 90% had an issue with at least one of these kinesiological test muscles. Whether, correcting the 40% non-gait issues would then uncover more gait issues when we had a normal intact muscle needs to be determined. I found (Dr. Erdmann) it revealing that in this small sample size that 10% of my gait issue patients came back (as gait not VR is a part of my initial correction on patients) whereas, Dr. Corwin's did not. Perhaps as dedicated Applied Kinesiologist we need to focus on the VR system more and consider using an integrated AK technique like N.O.T. to correct this in our practice.

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The Efficacy of Chiropractic Manual Muscle Testing in Predicting Patient Outcomes: A Collaboration of Disciplines to Evaluate for Multiple Chemical Sensitivity in a Non-Lowered Threshold Patient - A Case Study

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ABSTRACT:
The aim of this research was to differentiate the effectiveness of a mouth appliance as a structural entity versus a chemical entity and biological disruptor; this research suggests that in the case of an abraded and/or broken appliance, the practitioner should visually and manually inspect the integrity of the appliance. Manual muscle testing was utilized consistent with Applied Kinesiology techniques to investigate the potential relationship of a mouth guard and symptoms consistent with Multiple Chemical Sensitivity.

INTRODUCTION:
Dental appliances such as night guards and mouth guards are widely used to prevent injury in contact sports, as part of certain dental procedures such as tooth bleaching, as a treatment for bruxism or TMD, or in orthodontics.

Many of these appliances are commonly made containing Poly Methyl Methacrylate (PMMA) resin and Bisphenol A (BPA). BPA is the building block of polycarbonate plastic. When these devices are heated and/or exposed to detergents/scrubbing the ester bonds degrade and Bisphenol A leaches from the guard into the mouth and body tissues.

Scientific studies show Bisphenol A can wreak havoc on the endocrine system, which regulates important hormones. The chemical is associated with adverse health effects including breast cancer, immune system dysfunction, precocious puberty in females, and higher rates of reproductive dysfunction.

METHODS:
A single clinical case study was conducted at Tufts University School of Dental Medicine TMJ Pain Clinic. Present was a healthy, vibrant 44 year old female patient whose mouth guard proved less effective than it had been in the past. The patient suspected that her mouth guard had lost structural function and was no longer supporting her TMJ dysfunction. Within days of suspecting an ill-fitting mouth guard, she experienced headaches, neck pain, and dizziness. Concomitantly, the patient developed symptoms of Multiple Chemical Sensitivity where she became nauseous, light-headed, and unable to tolerate even the slightest fragrances that she had been able to tolerate a few weeks prior.

This patient then presented to my office where upon my examination, manual muscle testing utilizing Applied Kinesiology (AK) techniques, I was unable to elicit an inhibition of the previously facilitated Pectoralis Major Sternal (PMS) to various bite position challenges while she was wearing the mouth guard. However, upon tasting the appliance and drawing saliva around her mouth, the previously facilitated (muscle graded +5/5) PMS then showed an inhibition with manual muscle testing (muscle graded +4/5). Applied Kinesiology tests muscles before and after applying a variety of challenges and treatments, making clinical judgments based on short-term changes in the muscle thereafter.[1] It is generally considered to be a break testing methodology[2] using a binary grading system with reference to the test muscle as "facilitated" or "strong" corresponding to a grade 5, or "functionally inhibited" or "weak" as shown by a grade 4 or less on a 0-5 scale.

After three weeks from the onset of her above symptoms, she and I presented to Tufts USDM where, when the appliance was removed and examined, it was discovered that the patient's appliance had a crack as well as many abraded surfaces from regular scrubbing.

RESULTS:
I accompanied the patient to her evaluation at Tufts University School of Dental Medicine and, using Applied Kinesiology procedures, evaluated the patient as I had done in my office. Upon manual muscle testing, the Pectoralis Major Sternal (PMS) muscle was used prior to insertion of the mouth guard. The muscle test revealed an intact, facilitated PMS muscle, graded at +5/5. The patient was then asked to insert the mouth guard, which had been abraded and cracked, into her mouth and simply bite down in various directions to evaluate for the structural integrity of the appliance's support on the TM joint. Again, the PMS was tested as a facilitated muscle (graded as intact at +5/5).

Next, I asked the patient to taste the mouth guard, pulling on saliva in the mouth, yet not to bite down on the appliance. The PMS was again evaluated and tested as an inhibited muscle (graded at +4/5). This same sequence had been repeated on the same patient, several times in my office and again at the TMJ clinic with consistent results.

Next, the Tufts USDM clinic director was able to cut away the broken portion of the mouth guard so that no disrupted edge remained and smoothed the abraded areas to a polish. The mouth guard was again inserted into the patient's mouth and I asked her to taste the appliance, pulling saliva throughout her mouth. I then again tested the PMS muscle, which tested as a facilitated muscle (graded +5/5). This facilitation also worked as a predictor of lack of chemical sensitivity. The patient's original symptoms of dizziness, nausea, headache, great sensitivities, and intolerance to smells began to subside and over four to six weeks, abate. It was also recommended that she no longer scrub her mouth guard with a toothbrush, but rather rub it with a cloth. The patient was also fit with a new mouth guard, utilizing the same materials.

DISCUSSION:
Materials used to manufacture mouth guards often contain poly methyl methacrylate (PMMA) auto-polymerizing resin and Bisphenol A (BPA). A disadvantage to this chemical processing to formulate dental appliances such as mouth guards is highlighted in the 2010 *Indian Journal of Dental Sciences*:

"Incomplete polymerization leads to greater amount of unreacted monomer in the denture base causing…a potential tissue irritant."[3]

In 1998, scientist Patricia Hunt was conducting genetics studies utilizing female mice. An assistant lab worker scrubbed the animals' plastic cages and water bottles while using a detergent. The following day, she noted great abnormalities in their egg chromosomes and contributed this to the leaching of the Bisphenol A (BPA) into the animals' tissues.[4]

Sierra Magazine also quoted Hunt, "…the amount of leaching increases as the plastic ages and is degraded by its use."[5]

In *Scientific American*, Adam Hinterhuer states:

"But during the manufacturing process, not all BPA gets locked into chemical bonds, explains Tim A. Osswald, an expert in polymer engineering at the University of Wisconsin–Madison. That residual BPA can work itself free, especially when the plastic is heated…"[6]

In the July 2012 *New York Times*, it was noted that sippy cups and baby bottles could no longer contain BPA.

"But the ban does not apply more broadly to the use of BPA in other containers...

BPA's potential to disrupt the hormonal system has made its use in plastics for food purposes controversial.

A report issued in April 2008 by the United States Department of Health and Human Services' National Toxicology Program cited "some concern for neural and behavioral effects in fetuses, infants, and children at current human exposures."

The government of Canada went further that same month. After seven years of study, it listed BPA as a toxic substance under its environmental protection act."[7]

A possible explanation arrived at is that from repeated scrubbing with an abrasive toothbrush and detergent on the mouth guard over years, plus with a break in the material, incomplete polymerization occurred, potentially leaching a chemical such as BPA into the saliva and surrounding tissues.

When the abraded mouth guard was smoothed and polished, and when the broken part removed, the structure was intact again and less apt to leach from non-polymerized material.

CONCLUSION:

The aim of this research was to differentiate the effectiveness of a mouth appliance as a structural entity from that of a chemical entity and biological disruptor. Often, the chiropractic and dental professions check for the integrity of a mouth appliance as a structural supportive device; this research suggests that in the case of an abraded and/or broken appliance, the practitioner should visually and manually inspect the integrity of the appliance because chemicals may be leaching into the saliva and surrounding tissues from an abraded and/or broken device.

Those in the health professions who treat patients who wear mouth guards should regularly check and alert patients whose mouth guards are cracked and/or abraded. Also, those mouth guards which are disposable and more likely used in sports should be discarded if any chewing has occurred to help

prevent the potential for a chemical leach into the saliva and surrounding tissues.

This qualitative research also suggests further study into a quantitative investigation of saliva and/or blood to track the chemical absorption and abatement processes.

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