COLLECTED
PAPERS OF THE MEMBERS
OF THE
INTERNATIONAL COLLEGE OF APPLIED KINESIOLOGY

PRESENTED DEC. 7th THROUGH 10th, 1982

SHELDON C. DEAL, N.D., D.C.
CHAIRMAN, I.C.A.K.

INTRODUCTION

By

Sheldon C. Deal, D.C., N.D.

Chairman

This fourteenth collection of papers by the members of the International College of Applied Kinesiology represents 32 papers written by 24 authors.

These papers will be presented by their authors to the general membership at the Winter meeting to be held on the S.S. Norway on December 7, 8, 9, 10, 1982. The authors welcome comments and further ideas on their findings either on the Norway or you may write them directly; as their addresses are included in the Table of Contents.

These papers do not represent the official educational material of the International College of Applied Kinesiology, but rather areas of special interest to the individual members which have been under research. The papers are presented in an unedited form.

The papers are being mailed out to the members well in advance of the S.S. Norway meeting. This will allow the membership at large to read the papers in advance which will save time at the Winter meeting and hopefully stimulate more questions from the members and more demonstrations from the individual authors.

We the members of I.C.A.K. can be proud of the amount of research being conducted and feel fortunate to have it at our fingertips in the form of these Collected Papers. It cannot help but be an asset to our health and also to the health of our patients.

A. K. IN ZERO GRAVITY

by

MICHAEL D. ALLEN, D.C., N.D.

ABSTRACT: In space flight, there are several stressors, namely: weightlessness, ionization radiation, temperature and humidity extremes, acceleration, circadian rhythm disruption and noise and vibration as well as altered atmospheric gas concentrations. Health is important no matter where you are in the universe. The stressors of a zero gravity environment are briefly discussed with a special accent on muscle testing in weightlessness.

INTRODUCTION: The Gemini program (1965-1966) permitted physiological testing of progressively longer space flights up to and exceeding the duration required for a moon mission. The significant space-related changes found during the Gemini program were moderate loss of red cell mass, moderate orthostatic intolerance, moderate loss of work capacity, minimal loss in bone density, minimal loss of calcium and muscle nitrogen, and the high metabolic costs of extravehicular activity (Ref. 1-8, 1-9, 1-10). It was important to find out whether humans could adapt to the weightless environment of space and then readapt to the Earth environment upon returning.

The significant space-related changes found during the Apollo program (1968-1972) were: vestibular disturbances, in-flight cardiac arrhythmia, reduced post-flight orthostatic tolerance, reduced post-flight exercise tolerance, post-flight dehydration and weight loss, suboptimal food consumption during flight, decreased red cell mass and plasma volume, trends

toward negative in-flight balances of nitrogen, calcium, and other electrolytes, increased in-flight adrenal hormone secretion, and no in-flight diuresis. (Ref. 1-8, 1-11, 1-12, 1-13).

These two space programs set the stage for the Skylab mission for further data to determine how long man could remain in space.

The mission of the Skylab project was designed to: a) conduct Earth resource observations, b) advance scientific knowledge of the Sun and stars, c) study the processing of materials under weightlessness, and d) better understand man's space flight capabilities and basic biomedical processes. (Ref. 11-4). It is the latter item we shall study in this paper.

The objective of better understanding man's space flight capabilities and basic biomedical processes were quite broad. This objective included the study of capabilities, limitations, and usefulness of humans to live and work in space effectively as well as investigation of the biological effects of a continued state of weightlessness.

Prior to Skylab the longest space flights were Gemini 7 for 14 days, Soyuz 9 for 19 days, and Soyuz 11 for 24 days in which the cosmonauts were found dead after re-entry.

Insufficient data existed as to whether, or how long, human beings could survive in zero gravity. The biomedical experiments were designed to study the effect of long duration space flight on the crew. As well, they helped to evaluate the metabolic effectiveness of a human in space, in order to determine future time limitations if any, environmental control and task planning. Major areas to be investigated were nutrition, musculoskeletal function, cardiovascular function, hematology, neurophysiology, pulmonary function, and metabolism.

In this paper we shall review six major areas: 1) body weight changes, 2) anthropometric changes, 3) fluid shifts and blood changes, 4) orthostatic tolerance differences, 5) hemodynamic changes, and 6) muscle testing and weightlessness.

BODY WEIGHT CHANGES:

Loss in body weight during space flights has been consistently observed. These results were achieved using an electronically timed spring-mass oscillator. Figure III-1 shows a representative body mass pattern. Weight loss was experienced by each of the crewmen during the initial stages of the mission. Although there were some individual differences in the pattern of weight loss, the weight loss continued throughout the duration of the first two flights. The post-flight recovery was relatively rapid, however, with most of the weight being regained within the first 17 days. The 84-day mission was significant regarding body mass in that all of the crew members started to regain body mass in-flight following the initial drop. One difference between the third manned mission and the first two was that both food and exercise were increased on the third mission. Since the exercise was increased, the in-flight metabolic costs were higher than expected. Also as a result, the initial body mass loss of crew members on the third flight was slightly less and, additionally, the recovery to pre-flight level was faster.

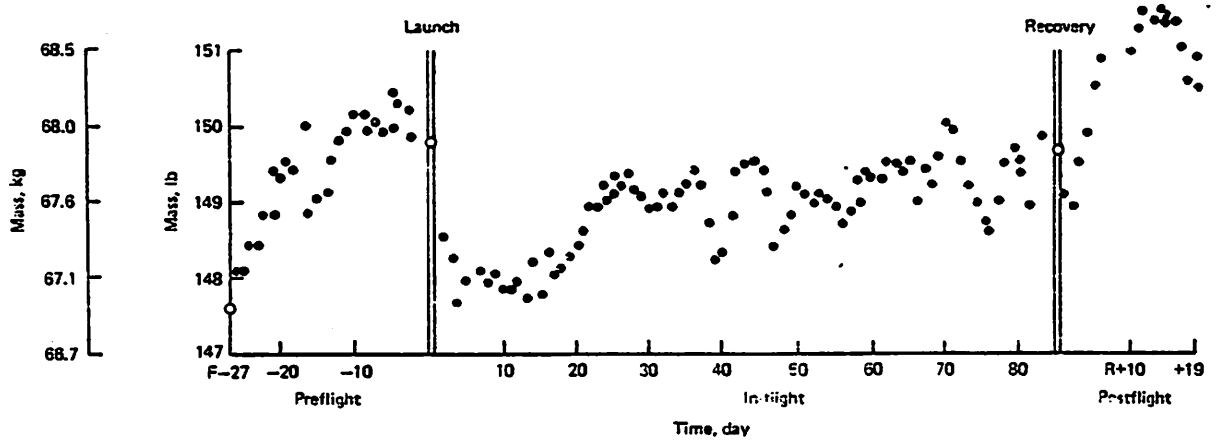


Fig. III-1. Body mass measurement of Commander, 3rd Manned Mission. (From ref. III-11, p. 383.)

ANTHROPOMETRIC CHANGES:

The weightless environment caused several physiologically significant anatomical and anthropometric changes. While in weightlessness, the crewmen assumed a posture resembling that of a quadruped. The dorsal-lumbar spine straightened as a result of the absence of gravitational forces, and a consequent increase in height of over two inches was observed. This increase may have been due, in part, to an expansion of the intravertebral discs due to reduced pressures. The girth measurements of the trunk (abdomen and chest) reduced, probably due to the stretching of the torso. Interestingly, the center of mass in-flight shifted toward the head by three to four centimeters--considered a large shift. The graph in Figure III-3 shows height and center of mass measurements on representative days before, during, and after the 84-day mission.

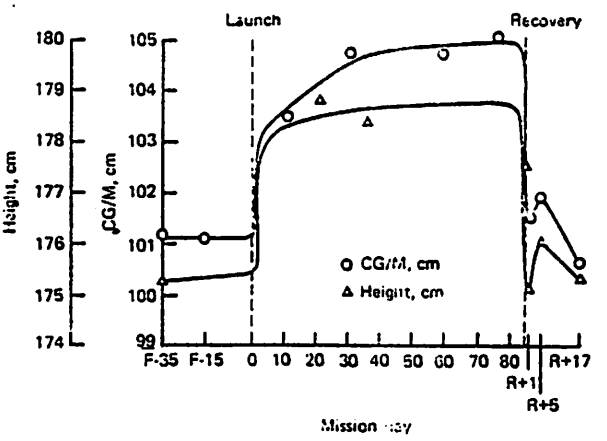


Fig. III-3. Center of gravity/center of mass, Skylab 4 Pilot. (From ref. III-12, p. 650.)

Limb-girth measurements were carefully made to determine the volume of the arms and legs. All crew members had lost more than 0.8 liters (27 ounces) of extravascular fluid from the calf and thigh by the time of the first in-flight measurements on day 3. (Ref. III-12). (See Figure III-4). The mean loss for the first mission was 1.68 liters (57 ounces) as compared to 1.12 liters (41 ounces) for the third mission. On the first day post-flight, the mean loss was 1.06 liters (36 ounces) for the second mission as compared to 0.77 liters (26 ounces) for the third mission. This variance could possibly have been due to the increased in-flight exercise. It is not clear, however, whether the results were caused by a prevention of muscular atrophy or by the effect on the cardiovascular system. (Ref. III-13).

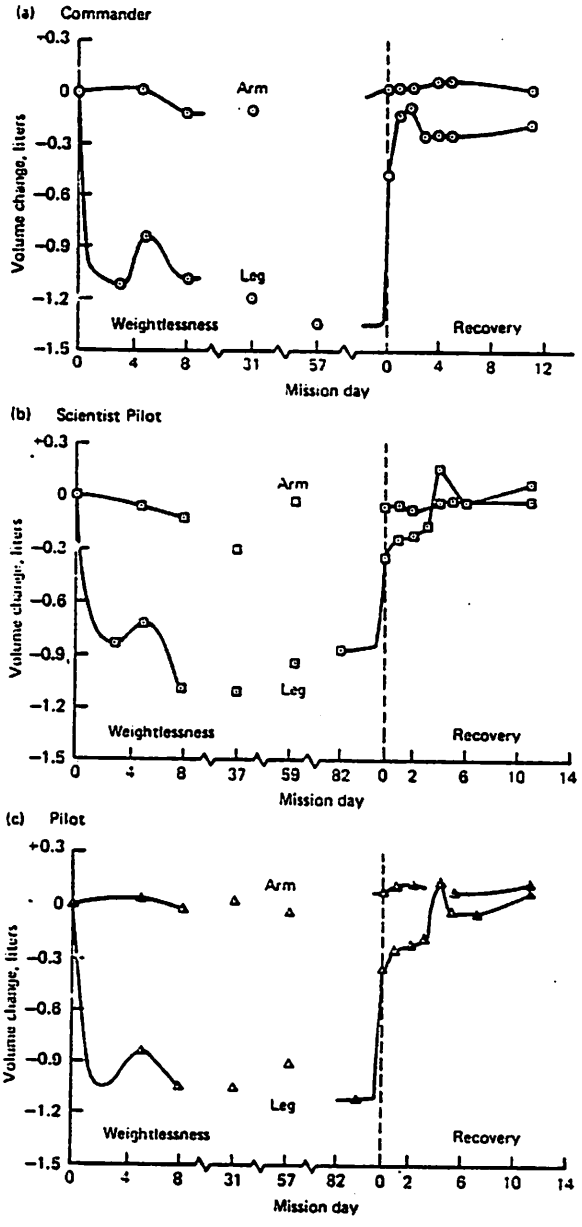


Fig. III-4. Change in left limb volumes Scientist Pilot, 3rd Manned Mission. (From ref. III-12, p. 649.)

FLUID SHIFTS AND BLOOD CHANGES:

Early in the mission, the astronauts experienced facial puffiness as well as upper body venous engorgement. This finding seemed associated with the approximate 1.00 liter (34 ounce) or 13 percent loss of total body volume. As a result of the loss of hydrostatic forces of gravity, the body fluid migrated toward the head and to a more centrally located area. (See Figure III-6). Under the 1 g force, the foot and lower leg veins were distended, but this did not appear under weightlessness. Instead, the jugular vein and veins of the temple and forehead were completely distended and full. (Ref. III-12).

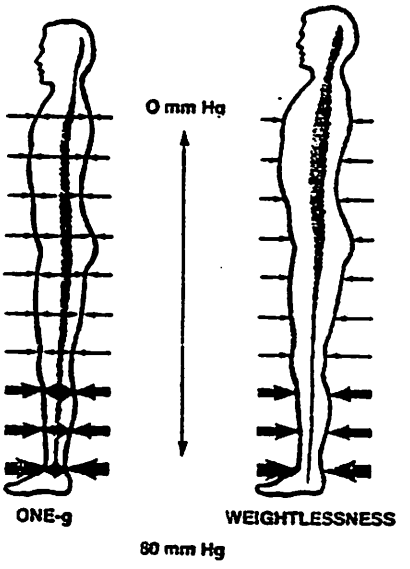


Fig. III-6. Fluid pressure/volume changes under weightlessness. (From ref. III-12, p. 656.)

The Skylab crew members also showed a reduction in their red cell mass. This is consistent with findings in the Gemini and Apollo missions. The mean loss in the 28-day Skylab mission surpassed that found in the Apollo (14-day) crew members. The loss in the red cell mass immediately after

the 22-day mission was greater than the loss observed after the 84-day mission. By far the quickest response in red cell mass recovery was observed in the 84-day mission. Significantly, a greater number of circulating reticulocytes (reflecting more regeneration) was observed following the longer mission. This showed that the red cell mass does not continue to deteriorate in weightlessness. A new homeostatic level is attained in zero gravity. It may be concluded from this evidence that the initial loss of red cell mass does not cause any deterrent to prolonged space flights. However, it is not known why this alteration or drop in reticulocyte counts has been observed.

> "The metabolism of the red cells was investigated because previous studies had shown that the only mechanism responsible for the destruction of red cells by hyperoxia was peroxidation of unsaturated fatty acids in the red cell membranes. That is, oxidation of the fatty acids in the red cell membrane results in loss of integrity of the membrane and cell destruction. Hemolysis, or red cell breakdown, could be attributed, therefore, to the peroxidation effect. In the Skylab mission there was no evidence of lipid peroxidation. Significant alterations in the glycolytic (glucose breakdown) intermediates and enzymes in the red cells were noted. These alterations, however, cannot be interpreted as evidence of red cell damage. (Ref. 111-15).
>
> "These data did not answer the etiology question concerning the loss in red cell mass. A postulated control mechanism associated with the fluid shift appears attractive." (Ref. 111-12).

ORTHOSTATIC TOLERANCE DIFFERENCES:

One of the most critical experiments monitored on the missions was the lower body negative pressure (LBNP) measurement. This experiment clearly reflected cardiovascular deterioration that could have forced abortion of the mission. It was important that the crew members on the third mission, of 84 days, did not exhibit the same changes as were found in the two earlier Skylab missions. The in-flight data served to be a fairly

accurate prediction of post-flight status of orthostatic tolerance. Measurement of the LBNP in weightlessness posed a greater stress on the cardiovascular system than it did under 1 g conditions.

The results showed that leg volume change during flight was roughly twice that in a 1 g environment (6 volume percent compared to 3 volume percent). The systolic blood pressure drops from about 130 mm Hg to around 80, whereas under 1 g conditions the pressure does not reach 100 mm Hg. The heart rate during flight shifted from about 70 beats per minute to approximately 118 beats per minute. In a 1 g environment the heart beat increases from 58 to only 80 beats per minute at the most. It is obvious from these data that the LBNP test was extremely stressful under weightless conditions.

The cardiovascular responses to LBNP showed the greatest instability in orthostatic tolerance, the greatest degeneration occurring during the first 3 weeks of flight. The alterations in fluid distribution during early exposure to weight loss created marked cardiovascular changes which impaired orthostatic tolerance mechanisms within 4 or 5 days. After 5 to 7 weeks, the cardiovascular responses became more stable and the orthostatic tolerance appeared to improve. Figure III-7C shows the cardiovascular response of the same astronaut in his last in-flight test on mission day 82. Even though the percent change in leg volume was greater than on mission day 6, and the heart rate pattern was similar, the systolic blood pressure did not drop below 100 mm Hg. Although the diastolic blood pressure increased slightly, a pulse pressure of about 30 mm Hg was maintained during the most rigorous part of the test. The astronaut had made an adaptation and was tolerating weightlessness better. Improved orthostatic tolerance was evident even though the calf girth continued to decrease. (Figure III-8).

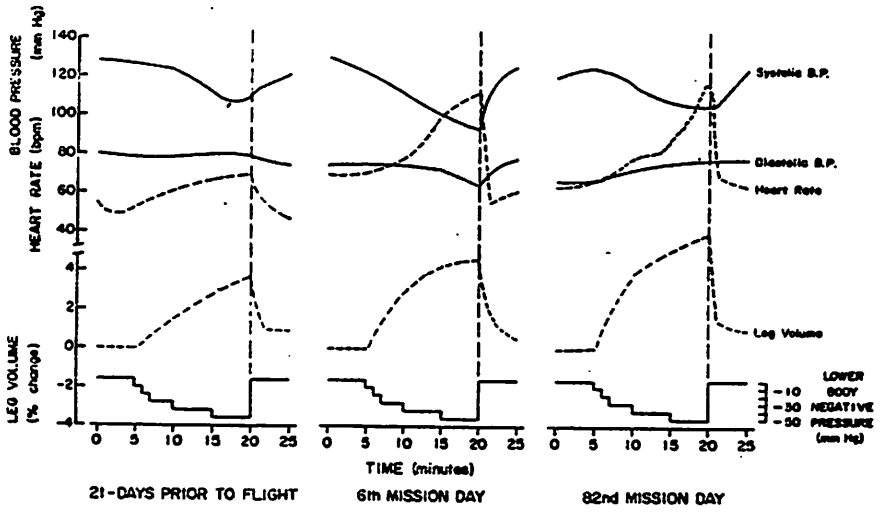


Fig. III-7 a, b, c. Cardiovascular responses of the Scientist Pilot, 3rd Manned Mission. (From ref. III-16, p. 556 and p. 582.)

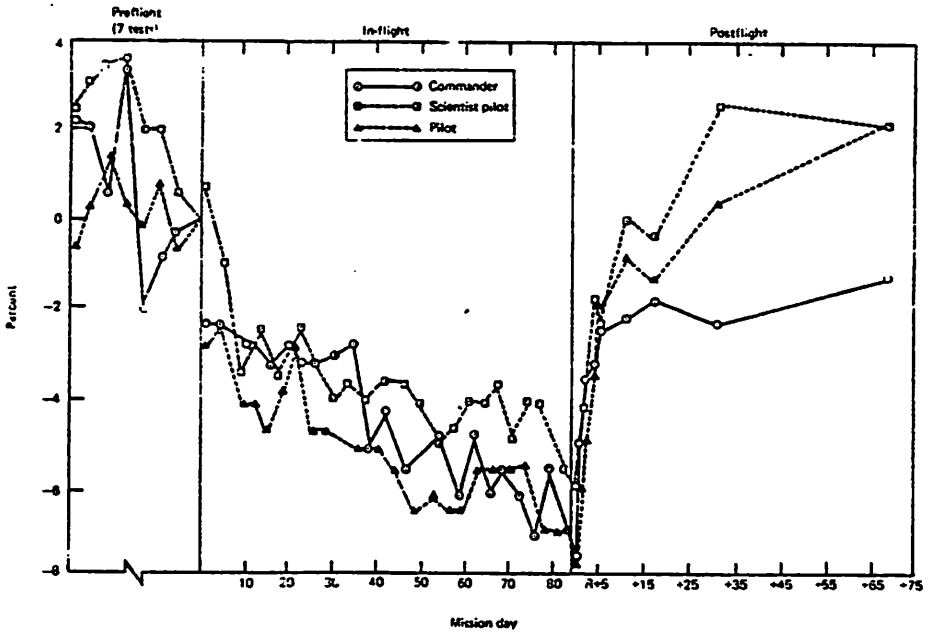


Fig. III-8. Calf girth of the three Skylab 4 crewmen measured just prior to each lower body negative pressure test. The mean $\frac{R+L}{2}$ of the right and left calf is shown. (From ref. III-16. p. 567.)

HEMODYNAMIC CHANGES:

The in-flight study of hemodynamic changes in the legs elicited additional information related to orthostatic tolerance, fluid shift, and blood volume changes.

> "Venous compliance and arterial blood flow were determined by occluding venous flow with a pressure cuff above the knee and then recording volume differences from a mid-calf segment by means of a volume transducer. Flow and compliance were determined by appropriate protocols. Muscle pumping action was determined by placing the subject in the LBNP device at -30 mm Hg. After 3 minutes the astronaut made 10 maximal-effort isometric contractions, waited 1 minute, and then repeated the same number of contractions. The amount of blood collected under negative pressure and the amount remaining after pumping were determined (Ref. 111-17)."

All the astronauts revealed an increase in blood flow during flight.

> "Venous compliance slowly increased to day 15, slowly decreased to day 40, and then dropped to less than pre-flight values at recovery."

Muscular activity caused the absolute blood flow to increase several times. The compliance changes may provide the basis for the changes in orthostatic tolerance, work capacity and LBNP responses when considered with the decreased blood volume. (Ref. 111-17).

MUSCLE TESTING IN A ZERO GRAVITY ENVIRONMENT:

During the Skylab missions it was noticed that a rapid disuse atrophy of the anti-gravity, weight bearing muscle groups, appeared unless suitable exercise was provided as a preventive measure. Exercise facilities such as a bicycle ergometer and isometric devices--two modified mini-gyms--were used on the first two missions. The third mission--the 84-day mission--utilized the bicycle slightly more, used the modified mini-gyms, and in addition, the crew members typically worked 10 minutes per day walking,

jumping, or jogging on a treadmill. High loads were placed on the calf muscles in particular. The device could not be used for aerobic work as fatigue was rapid.

Changes in the achilles tendon reflex time were observed in the first few days following the flight.

In a weightless environment, there is little use for leg muscles as compared to a normal 1 g environment.

> "The sensory receptors in the legs, which reflect stress and tension, are used less and the signal intensities are less due to lack of weight." (Ref. IV-1).

It appears that the sensory system adapts quickly to weightlessness and with the return to a 1 g environment, initially there is oversensitivity of the neuro-muscular system. This may represent a brief period of hyperactivity of the proprioceptors in the servo-feedback mechanism. A rapid readjustment to the less sensitive pre-flight level follows.

I believe this information is important since one of the major foundations of Applied Kinesiology is that specific muscles work with specific organs. We know that if a specific organ is weak, it produces an associated muscular weakness. It is also important to recognize that a specific muscle weakness, if left uncorrected for a long period of time, can produce an associated organ deficiency and organic problems can be the effect.

Tests such as the diminished calf girth and diminished achilles tendon reflex time, for example, may lead the AK practitioner to a diagnosis of a systemic imbalance which could be easily corrected in a zero gravity environment possibly changing the results of the mathematical findings.

Other examples of the usefulness of AK in the zero gravity environment can be seen in light of the above information. Structural manipulation may become easier since skeletal changes occur, as seen in the section on anthropometric changes. Nutritional imbalances could be diagnosed and corrected more accurately as could fluid shifts and blood changes.

Granted, a new environment dictates a modified hemostatic position, however, the entire resulting data could be changed, giving a new perspective to weightlessness if the in-flight management of the experiment were different. What we are dealing with is physiology, and physiology is dynamic--not static. One simple change in the astronaut's body may cause a modification of the experimental outcome.

Muscle testing in a weightless environment can be difficult in that stabilization is required to produce force on a muscle. The problem is that in a weightless environment, there is no firm structure to push against while floating. If Applied Kinesiological procedures were to be utilized in a zero gravity environment, a special structure would need to be developed to hold the patient in a steady position to test specific muscles as well as stabilizing the examiner.

For example, the patient could lie on his back, strapped in with velcro fasteners allowing the arm to float free. The examiner would hook his feet into the triangular openings in the aluminum floor, enabling him to lean on the table to stabilize the patient, while at the same time test the muscle. In this way, both doctor and patient would be held steady. This technique could be utilized for all different muscle groups and also the patient would not need to lie horizontal. The patient could

be standing upright--if you could find upright in space--seated, or lying down, as we do in a 1 g environment. Neurolymphatic and neurovascular reflexes would be important in space flight just as nutritional substances. All the factors of the five-finger concept would be applicable to the zero gravity environment. Acupuncture meridian diagnosis would be of specific interest as the electromagnetic life support system of the body may be affected by the ionized atmosphere. Applied Kinesiological stabilization of the in-flight patient may diminish some of the orthodox medical findings in a zero gravity environment.

The typical medical model is based upon intervention after the fact. Space is a large and dangerous playing field that should not be tempted. Prevention is much preferable to crisis.

I do recognize that parameters must be established in order to give an orientation for a new approach. We have by no means answered all the questions pertaining to space flight, but a modification of the in-flight physiology could yield a new approach to them. A. K. definitely deserves a place in the final frontier of space travel. It will be there--the question is, how long will it take NASA to open their eyes to it?

BIBLIOGRAPHY:

1-8. Hull, W. Life Sciences Directorate, NASA, Johnson Space Center. Personal communication.

1-9. Berry, C. A. and A. D. Catterson. Pre-Gemini Medical Predictions Versus Gemini Flight Results. Gemini Summary Conference, NASA SP-138, 1967, p. 197.

1-10. Lutwak, L., G. D. Whedon, P. A. LaChance, J. M. Reid and H. S. Lipscomb. Mineral, Electrolyte, and Nitrogen Balance Studies of the Gemini VII Fourteen-Day Orbital Space Flight. J. Clin. Endocrin. and Metabl. 29:1140-56, 1969.

1-11. Johnston, R. S. Skylab Medical Program Overview. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp.1-3.

1-12. Graybiel, A., E. A. Miller and J. L. Homick. Experiment M-131, Human Vestibular Function. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, P. 171.

1-13. Johnston, R. S., L. F. Dietlin and C. A. Berry (eds.). Biomedical Results of Apollo, NASA SP-368, Washington, D. C.: U. S. Govt. Printing Office, 1975, p. 592.

11-4. Belew, L. F. and E. Stuhlinger. Skylab A Guidebook. Washington, D. C.: U. S. Govt. Printing Office, 1973 (stock no. 3300-00508), pp. VII, 1-3, 7-11, 12, 68, 161.

111-1. Proceedings of the Skylab Life Sciences Symposium, NASA TMX-58154, 1974, Vols. I and II.

111-11. Thornton, W. E. and J. Ord. Physiological Mass Measurements in Skylab. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp. 373-386.

111-12. Thornton, W. E., G. W. Hoffler and J. A. Rummel. Anthropometric Changes and Fluid Shifts. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp. 637-658.

111-13. Whittle, M., R. Herron and J. Cuzzi. Biostereometric Analysis of Body Form. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp. 417-424.

111-15. Mengel, C. E. Red Cell Metabolism Studies on Skylab. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp. 507-518.

111-16. Johnson, R. L., G. W. Hoffler, A. E. Nicogosian, S. A. Bergman and M. M. Jackson. Lower Body Negative Pressure: Third Manned Skylab Mission. Proc. Skylab Life Sci. Symp., NASA-TMX-58154, 1974, pp. 545-595.

Bibliography, Page 2

111-17. Thornton, W. E. and G. W. Hoffler. Hemodynamic Studies of the Legs under Weightlessness. Proc. Skylab Life Sci. Symp., NASA TMX-58154, 1974, pp. 623-635.

IV-1. Van Huss, W. D. and W. W. Heusner. Space Flight Research Relevant to Health, Physical Education, and Recreation, NASA 1979, p. 29.

THE GASTROCNEMIUS MUSCLE

Herbert C. Anderson, D.C.

ABSTRACT - Many patients fall forward or anterior when standing on the plumb line. Some patients list 4 to 5" anterior.

While attending the I.C.A.K. seminars the past few years, I have noticed more of the members are now jogging - tennis - handball - and are active physically.

A good percentage of all the runners we have in our office I notice some pronate to varying degrees. Occasionally we have a runner supinate. Many of the runners toe laterally and have varying types of gaits. Even the "great white father" has a toe out in his gait although still is an excellent tennis player and skier.

When these patients stand before the plumb line, the center of gravity at the 5th lumbar level is 5 to 6" anterior to the plumb string. From the lateral view the plumb should fall at the malleolus - femur - shoulders and ears. When looking from the lateral, the body is anterior to the center line of gravity.

We have found extreme weakness to the GASTROCNEMIUS MUSCLES bilaterally, - occasionally unilateral. We fascial flush the muscle and using Golgi tendon and spindle cell correction, neurolymphatic have noticed remarkable correction to the anterior gravity pull.

The method of testing is to have the patient supine, flex the knee to 90 deg. so the foot is flat on the table. The opposite leg is straight. Drop the toes inferior and medial - now the heel is superior, - this shortens the GASTROCNEMIUS MUSCLE. The test is to grasp the heel with one hand and support the knee with the opposite hand and traction straight inferior. It is amazing how many weak GASTROCNEMIUS MUSCLES we find with this procedure.

REFERENCES: Walthers Applied Kinesiology
Goodheart published papers
Alan Beardall - personal conversation

Herbert C. Anderson
25 Curtis Street
Medford, Mass. 02155

VITAMIN A AND ITS ROLE IN HEALTH AND DISEASE

(c) Wm. R. Borrmann, N.D., D.C.

VITAMINS AND THEIR ROLE IN HEALTH AND DISEASE

Vitamins are defined as naturally occuring essential organic constituents of the diet which in minute amounts aid in maintaing the normal activity of the tissues. They come from food sources. Also known as coenzymes meaning substances that enter into a chemical reaction but do not become part of end product.

CODE:

(RDA) Recommended daily dose. (BDR) Basic dosage range. (RDR) Research dosage range. (TR) Toxicity range. (EM) Essential for metabolism. (EA) Equal amounts required to assist absorbtion. (ED) Excessive dosage may result in toxic side effects. (EPU) Excessive prolonged use may result in toxic side effects for some individuals. (MG) Milligrams. (MCG) Micrograms. (IU) International Units. (USP) United States Pharmacopea. (RE) Retinol Equivalents.

FAT SOLUBLE VITAMIN A

Being fat soluble it requires fats as well as minerals to be properly absorbed by your digestive system. It occurs in two forms (1) preformed vitamin A, also called retinol, which is found only in foods of animal origin and (2) provitamin A, also known as carotene, which is found in both animal and plant life. It is measured in IU - RE - and USP Units.

(RDA) 5,000. (BDR) 10,000 to 25,00 IU. (RDR) 15,000 to 250,000 IU. Toxicity range (TR) if more than 100,000 IU are taken daily can produce toxic symptoms in adults, if taken for several months. More than 18,500 IU taken daily can produce toxic effects in infants.

NUTRIENTS THAT ASSIST ABSORBTION

B2. B12. C. D. E (EM). Choline. Calcium. Phosphorus. Zinc. Unsaturated fatty acids. Polyunsaturated fatty acids with carotene work against vitamin A unless there are antioxidants present. Lecithin. Pancreatic enzymes. Bile salts. Intestinal motility.

NUTRIENTS AND FACTORS THAT PREVENT ABSORPTION

Alcohol. Coffee. Cortisone. Iron (ferrous sulfate). Mineral oil. Lack of vitamin D. Cigarette smoke. Sodium benzoate. Liver damage. Insufficient proteins. Fats. Air pollution. Exposure to bright or artificial lights as movies and television. Heart disease. Malnutrition. Hypothyroidism. Pnuemonia. Cirrhosis.

BODY STRUCTURE ASSOCIATED WITH (VITAMIN A)

Bones, eyes, hair, skin, soft tissue, teeth, epithialial tissue, kidneys, liver, nerve tissue.

BODY FUNCTIONS USEFUL IN

Aids in regenerating epithialial body tissues. Hardening and scaling of skin around hair follicles. Acts to sustain resisteance to infections. Nerve damage due to improper skull growth which interfers with brain expansion. Aids in vision. Aids night vision. Chief function is to maintain normal growth and bone development. Promotes growth and repair of body tissue. Aids psoriasis. Aids resistance to diseases of the eyes, respiratory tract, and gastro-intestinal tract. Aids liver function, dry skin, itchey eyes, corneal ulcers, dry and brittle hair, appetite loss, soft tooth enamel, loss of smell, fatique and allergies. Promotes digestion and assimilation of food. Increases longevity (life span). Aids in maintaining normal glandular activity. Aids in pregnancy and lactation. Improves and maintains mucous flow and cilia action in the ears, nose, and throat. Aids sterility of both sexes. Aids kidney stone. Aids secondary anemia, cysitis, gastritis, sinusitis, bronchitis, physical weakness, acne, impetigo, emphysema, and hyperthyroidism.

THERAPEUTIC RESEARCH

Acne. Alcoholism. Excessive menstrual bleeding. Menopause. Arthritis. Asthma. Athletes foot. Bronchitis. Colds. Cysitis. Diabetes. Exzema. Heart disease. Hepatitis. Migraine headaches. Psoriasis. Sinusitis. Stress. Tooth and gum disease.

STORAGE AND LENGTH OF STORAGE

Stored in liver and kidneys. Long term storage. Also found in lungs, kidneys, adrenals, sex glands, and breasts.

NOTE

Excessive vitamin A may result in B complex deficiency.

Average dose 25,000 per day for maintainence divided by 4 equals actual vitamin A you will be getting into your system.

It is advised to increase vitamin A when calcium of phosphorus intake is required because half of vitamin A is needed to assist calcium absorbtion.

It has been estimated that you would have to take 100,000 IU per day for nine months to reach a toxic dose.

Best taken with vitamin D 10 parts of A to 1 part vitamin D.

If you are on the pill your need for vitamin A is decreased.

Those patients who stop taking birth control pills should increase their intake of vitamin A to replace thelost stores that occured while on the pill. Many times heavy menstrual bleeding occurs after pill is discontinued, vitamin A has been used with much success in these cases.

A is manufactured in the body from carotene (which is water soluble) found in vegetables (yellow and green). However, the carotene is locked within the indigestible cell walls and approximately only one percent of the carotene will enter the system. Also the conversion of carotene to vitamin A is only one sixth, more or less. Therefore, the best source of vitamin A would be liver, egg yolk, raw milk and butter-cheese if made from raw milk and fish oils. If diet is restricted of dairy foods and or liver or organ meat, than fish liver oil, either cod or halibut would be best source. They are also being used in research to reduce cholesterol.

Four thousand international units (IU) of vitamin A is equivalent to 2.4 mg.

Research on national level has shown vitamin A to be in short supply in the American diet along with vitamin D, calcium and iron (however, excessive iron, reduces the absorption of A).

Vitamin A works best with all the B-complex, D, E, Calcium, Phosphorus and Zinc.

Vitamin A acid (retin A) is sometimes prescribed for acne, but is available only by prescription. The basic dosage of vitamin A Acid seems to be 10,000 to 25,000 IU.

Vitamin A metabolism is linked with vitamins E and D.

Chronic infections, turberculosis, and cancer may cause massive urinary excretions of vitamin A.

Patients with gastro-intestinal problems, liver problems and or infections of any kind may have difficulty in retaining vitamin A or using vitamin A.

Vitamin A is insoluable in water and remains stable at ordinary cooking temperatures, basicly stable to heat, acids and alkalies.

Exposure to artificial light, sunlight may result in serious loss of the vitamin A.

NOTE (CONTINUED)

Is moderately sensitive to oxidation, soluable in oils and fats.

Is destroyed by heat in the presence of oxygen.

Surplus supplies or reserves are exhausted rapidly under strenous conditions.

The most common worldwide vitamin deficiency is of vitamin A. About one-third of the people in the world are deficient in vitamin A. This problem seems to be getting worse since vitamin is A is destroyed by pesticides and food additives.

Very useful in preventing stress ulcer or in those who are about to undergo surgery or other physical stress.

A assists in strengthening cell walls and gives protection against infection to the delicate linings of our internal organs. Therefore, useful in cases of chronic bronchitis and to miniimize the effect of the environmental pollutants present in the air we breathe

A assists in maintaining the health of the mucous membranes of our intestinal and urinary tracts. Therefore, aids digestion of our food and absorption of essential nutrients.

This mucous membrane and cell wall protection is leading researches to test vitamin A in cancer prevention. In a study by physicians at the Roswell Park Memorial Institute and at the State Universisty of Buffalo. Studies have shown that heavy smokers who had low levels of vitamin A had 4 times greater risk of developing cancer than smokers who smoked as much but their levels of vitamin A were maintained.

In a test with laboratory animals it was found that deficient or marginal levels of A are related to increased tumor susceptibility in the respiratory system, bladder and colon. It was also found that the retinoids (a form of vitamin A) seems to inhibit cancer of the stomach, vagina, cervix and lungs of laboratory animals.

Researchers are discovering that a combination of air pollution, carcinogens, smoking, and poor dietary habits associated with low levels of vitamin A may trigger cancer and or tumor development.

Rheumatoid arthritis has also been found to benefit from the use of vitamin A, especially in those cases where there is large production of collagenase, (a contributing factor to the destruciton of the joint) vitamin A decreases the production of this substance, which is similar in action to anti-arthritic drugs such as cortisone (a steroid), gold shots, penicillamin and aspirin. Researches have found that vitamin therapy is free of the negative effects these anti-arthritic drugs can produce.

Because vitamin is fat soluble it has been taught that there may be a possibility of oversupplying the body. However, toxicity is a rare problem and can be almost certainly avoided if zinc supplement is added to the diet. Zinc forces vitamin A out of storage in the liver into the blood stream.

NOTE (CONTINUED)

Lack of vitamin A is responsible for the most widespread from of blindeness of a nutritional origin in the world today. Cornea damage. In its early stage, it is reversible that is to say if treatment is instituted in time.

How wide spread is vitamin deficiency? In a Nutritional Survey begun in 1968 it was discovered that about 33 perent of children under five years of age and 29 percent of those aged six to nine years showed a blood level of vitamin A to be below that considered adequate. Also, that myopia in children is very probably associated with malnutrition.

Impaired vision results when body reserves of vitamin A are exhausted seems to be the conculsion of many researchers. The retina cannot function properly without A. Food consumption surveys indicate that there is a continuing drop in consumption of dark green and yellow vegetables per capita. It is these foods that are best sources of vitamin A and its precursors.

In autopsy surveys it is found that vitamin A storage in the liver in many people are nonexistent or marginal.

Research studies done in Iowa indicate that levels of serum Vitamin A now accepted as satisfactory may be too low. There may be a higher incidence of unsatisfactory vitamin a levels than was previously thought.

It is the visual pigments (visual purple) that enable the eye to adjust to changes to bright lights. As long as there is sufficient vitamin A, fresh amounts of of this visual purple or pigment are continually manufactured. With out sufficient amounts of this pigment "night blindness" or a difficulty in seeing properly in the dark may occur.

The Ebers Papyrus, written about 1600 B.C., and Chinese documents of the same period both recommend liver and honey in the treatment of night blindness. And as we know both of these substances contain ample amounts of vitamin A.

Vitamin A is readily destroyed by heat and light as we have said. However, heated fats sevelop a anti-vitamin A factor, which may be the main reason why the excessive use of heated oils or fats is asssociated with the high incidence of stomach and colon cancers as well as others.

Vitamin A is also necessary to maintain normal hearing and a sense of smell, healthy teeth and gums, healthy thymus.

Lack of vitamin A from a developmental standpoint causes many congenital defects such as: Hare lip. Hernia. Renal abnormalities. Blindness. Anophthalmia along with various other ocular defects. Degeneration of the endocrine and nervous systems. As we stated before the retian of the eye, which is modified nervous tissue, is absolutely dependent

NOTES (CONTINUED)

Vitamin is also highly essential for proper skeleton growth in children. Therefore, if the central nervous system grows with out corresponding growth in the boney structure it may severely affect the brain and nervous system function.

Dr. Henry Sherman of Columbia University increased the life span of rats (Osborne-Mendel strain of rats), he increased the life span of the male rats to 10 percent longer and the female rats to 20 percent longer by doubling their intake of Vitamin A twice. In the terms of human figgures this would amount to increaseing the human life span from about 70 years to 120 years. This is still theory however.

In another study done by F.C.H. Ross, M.D., and H.A.H. Cambell, M.D., they gave vitamins A and D for ten years to a group of patients to another group no nutrients where given. In the group given the A and D they had a incidence of 5.8 coronary heart disease. In the other group they had a incidence of 15.8 of coronary problem.

In laboratory animals birth defects occur when vitamin A is withheld from their diet.

Vitamin A intoxication is extremely rare with natural vitamin A. it is usually involved with the artificially produced vitamin A.

Some authorities believe that one of the early signs of vitamin A toxicity is emotional instability.

NOTES (CONTINUED)

on vitamin A.

A normally functioning thyroid gland is absolutely essential for normal vitamin A absorption and metabolism. This seems to be bore out by the evidence of retinal degeneration in association with longstanding vitamin A deficiency and or hypothyroidism.

Many of the signs and symptoms associated with vitamin A deficiency are in reality a zinc deficiency. Zinc is found in high concentrations in the same tissues that are high in vitamin A, such as the retina, which has the highest zinc concentration of any other tissue in the body. Serum zinc levels are necessary for the metabolism, storage and mobilization of vitamin A.

Research has found that serum levels of zinc and vitamin A levels in occular tissue is lower in those patients with optic neuritis, retinal degenerations, retinal detachment, chronic alcoholism, malnutrition, and drug toxicities.

Toxicity to vitamin A was first reported in 1944. usually limited to infants and young children who take 100,000 to 500,000 IU daily for 6 months or so. In an adult this would be equivalent to 1,000,000 to 5,000,000 IU a day. This acute hypervitaminosis A, is quite rare having only been reported in the Artic explores who had eaten the liver of the seal and or polar bear which contain 10,000,000 IU per pound.

Symptoms of excessive intake are: dry rough skin, itchy skin, dry coarse and or sparse hair on the scalp, eyebrows and eyelashes, fever, enlarged liver, painful deep swelling of the limgs withlimping and fractures, hydrocephalus, various eye defects such as cataracts, glaucoma, hemorrhages, firbosis, microphthalmos, anophthalmos, and exophthalmos. However, severe deficiency of vitamin A produces these same symptoms and or defects.

There are 80,000 people who are blinded each year by a vitamin A deficiency.

There has been less than 20 reported cases of vitamin A poisoning since 1944.

Researches still advise that dosages of 100,000 IU per day should be taken only under constant medical supervision.

Vitamin A is formed in the body from one the carotenoid provitamins, alpha-beta- or gamma-carotenoid, or cryptoxanthin (these are the yellow pigments found in most vegetables and fruits).

Vitamin A1 is the form found in mammals and salt-water fish.

Vitamin A2 is the form found in fresh water fish.

Many research studies indicate that vitamin A is one of the most frequently missed in the American diet. It must also be remmembered that without A vitamin D and calcium cannot be utilized well by the body.

DEFICIENCY SYMPTOMS QUESTIONNAIRE

This questionnaire is a simple nutritional screening device which can be most effectiveness when used in conjunction with other laboratory tests. However, when used alone it will give a broad immediate insight into possible nutritional deficiencies and many times assist in directing a nutritional approach.

CODE:

Use figure (1) for mild symptom indications.

Use figure (2) for moderate symptom indications.

Use figure (3) for severe symptom indications.

If any part of the question applies underscore the particular part of the question that concerns you.

Check only those symptoms which apply to your problem.

Do not write "NO" where answers do not apply.

NUTRITIONAL RECOMENDATIONS

If most of your answers are (1) you probably can correct nutritional deficiency through dietary means and one tablet per day of indicated nutrient of the (RDA) Recommended daily dose.

If most of your answers are (2) you probably can correct nutritional deficiency through dietary means and one tablet per day of indicated nutrient of the (BDR) Basic dosage range.

If most of your answers are (3) you probably can correct nutritional deficiency through dietary means and one tablet twice to three times per day of (BDR) Basic dosage range.

All tablets to be taken after meals. If oil soluble vitamins disturb digestion use fat digestive enzymes with each meal. If glandular supplements disturb digestion use protein digestive enzymes with each meal. If mineral supplements disturb digestion use protein digestive (HCL-Betain Hydrochloride) enzymes with each meal. However, if you have ulcer problems do not use acid digestive enzymes.

VITAMIN A - DEFICIENCY SYMPTOMS QUESTIONNAIRE

RDA - 5,000 IU per day. Taken after meals.

BDR - 10,000 to 25,000 per day. Taken after meals.

1. ____ *Allergies.*
2. ____ *Appetite loss.*
3. ____ *Weak reistance to skin infections.*
4. ____ *Weak resistance to bronchial infections.*
5. ____ *Dry hair problems.*
6. ____ *Diarrhoea.*
7. ____ *Rough, dry scaly skin.*
8. ____ *Itching/burning eyes.*
9. ____ *Loss of smell.*
10. ____ *Night blindness.*
11. ____ *Digestive and intestinal problems due to loss of stomach acid.*
12. ____ *Physical weakness.*
13. ____ *Kidney stones and or bladder stones.*
14. ____ *Sterility and or loss of sexual drive.*
15. ____ *Corneal ulcers.*
16. ____ *Ear disorders.*
17. ____ *Secondary anaemia.*
18. ____ *Swollen lymph tissue.*
19. ____ *No energy.*
20. ____ *Tear duct problems.*
21. ____ *Sinus problems.*
22. ____ *Susceptible to infections.*
23. ____ *Soft tooth enamel.*
24. ____ *Deeply indented lines in the finger nails.*
25. ____ *Dandruff.*
26. ____ *Dull hair.*
27. ____ *Itching, burning, dryness of eyes.*
28. ____ *Fingernails brittle.*
29. ____ *Warts.*
30. ____ *Leucorrhoea.*
31. ____ *Eczema.*
32. ____ *Diaper rash.*
33. ____ *Inability to gain weight.*
34. ____ *Buring urine sensation*

VITAMIN A - DEFICIENCY SYMPTOMS QUESTIONNAIRE (CONTINUED)

35.____*Irritability.*
36.____*Poor memory.*
37.____*Insomnia.*
38.____*Confusion.*
39.____*Senile vaginitis.*
40.____*Vaginitis.*
41.____*Susceptibility to boils.*
42.____*Arthritis.*
43.____*Asthma.*
44.____*Spinal cord problems.*
45.____*Weak muscular tissue.*
46.____*Dancing specks before your eyes.*
47.____*Flashes of light before your eyes.*
48.____*Eye strain and impaired vision.*
49.____*Bronchitis.*
50.____*Psoriasis.*
51.____*Hepatitis.*
52.____*Conjunctivitis.*
53.____*Sticky secretion and granulation of eyes.*
54.____*Susceptible to middle ear infections.*
55.____*Dry mouth and or saliva.*
56.____*Diabetes.*
57.____*Heart problems.*
58.____*Susceptibility to pneumonia.*
59.____*Catch cold easily.*
60.____*Susceptibile to hoarseness.*
61.____*Dry cough.*
62.____*Glandular problems (liver, pancreas, gall bladder).*
63.____*Nerve deterioration.*
64.____*Gum disease.*
65.____*Impaired hormone production.*
66.____*Joint pains.*
67.____*Headaches.*
68.____*Nausea and or vomiting.*
69.____*Hair loss.*
70.____*Bone pain.*

BEST DIETARY SOURCES (VITAMIN A)

Butter	1 tbsp	3.300 IU.
Cantaloupes	1/2 melon	3,700 IU.
Apricots (dried)	1 cup	1,600 IU.
Peaches (dried)	1 cup	3,250 IU.
Tomatoes (raw)	1 med 2 x 2 1/2	1,100 IU.
Pumpkin (raw)	1 cup	3,400 IU.
Kidneys	1/4 pound	50,000 IU.
Liver	1/4 pound	50,000 IU.
Beef	1/4 pound	50,000 IU.
Carrots (raw)	1 med.	10,000 IU.
Sweet potatoes (cooked/boiled)	1 med.	7,000 IU.
Asparagus (cooked)	1 cup	1,040 IU.
Beet greens (raw)	1 cup	6,700 IU.
Chard-Chicory-Water cress	1/2 cup	4,720 IU.
Dandelion greens	1 cup	15,000 IU.
Endive-Kale-Mustard greens	1 cup	7,180 IU.
Spinach (cooked)	1 cup	11,780 IU.
Winter squash (raw)	1 3/4 cup	4,950 IU.
Broccoli (raw)	1 cup	3,400 IU.
Parsley (raw)	1 tbsp	8,230 IU.
Turnip greens (raw)	1/2 cup	9,540 IU.
Carrots (diced-canned)	1 cup	1,700 IU.
Beet greens (cooked)	1 cup	7,440 IU.
Spinach (raw)	4 oz.	9,420 IU.
Turnip greens (cooked)	1 cup	10,600 IU.
Broccoli (cooked)	1 cup	3,400 IU.
Cauliflower (raw)	1 1/4 cup	90 IU.
Cauliflower (cooked)	1 cup	90 IU.
Sweet corn (cooked)	1 ear 5"	390 IU.
Peas (raw)	1/2 cup	680 IU.
Peas (cooked)	1 cup	720 IU.
Peppers (raw)	1 medium pepper	630 IU.
Pumpkin (canned)	1 cup	3,400 IU.
Winter squash (cooked)	1 cup mashed	6,190 IU.
Tomato ketchup	1 tbsp	1,800 IU.
Green beans (snap-raw)	3/4 cup	630 IU.

Green beans (snap-raw)	1 cup	660	IU.
Onions (raw)	1 2 1/2 diam	50	IU.
Onions (young green)	6 small less tops	50	IU.
Artichoke	1 3" diam.	390	IU.
Radishes (raw)	4 small radishes	30	IU.
Potatoes (white-raw)	1 med 2 1/2 diam.	20	IU.
Potatoes (baked)	1 med.	20	IU.
Beets (raw)	1 cup diced	20	IU
Beets (cooked)	1 cup diced	20	IU.
Chicken liver	2 med livers	32,200	IU.
Egg yolk (raw)	1 yolk	3,210	IU.
Egg (whole raw)	1 egg (medium)	1,140	IU.
Egg (dried-yolk)	1 cup yolks	5,540	IU.
Egg (dried-whole)	1 cup	3,720	IU.
Beef liver (raw)	3 oz.	43,900	IU.
Beef liver (fried)	2 oz.	53,500	IU.
Calf liver (raw)	3 oz.	22,500	IU.
Pork liver (raw)	3 oz.	14,200	IU.
Liverwurst	2 oz.	5,750	IU.
Peaches (raw)	1 med 2 1/2x2' diam.	880	IU.
Peaches (dry	1 cup	3,250	IU.
Plums (raw)	1 cup	350	IU.
Prunes (dry)	4 large	1,890	IU.
Apricot nectar	1 cup	1,090	IU.
Orange juice (fresh)	1 cup	190	IU.
Tangerine juice (fresh)	1 cup	420	IU.
Tomato-juice (canned)	1 cup	1,050	IU.
Watermelon (fresh)	1/2 slice 3/4x10	590	IU.
Apricots (raw)	3 apricots	2,790	IU.
Apricots (dry)	40 1/2's	7,430	IU.
Avocado	1/2 3 1/2x3 1/4	290	IU.
Bananas	1 med. 6x 1 1/2	430	IU.
Cherries (all raw)	1 cup pitted	620	IU.
Cherries (sour)	1 cup pitted	720	IU.
Blue cheese	1 oz	1,240	IU.
Cheddar	1 oz (1' cube)	1,400	IU.
Cottage	1 oz	20	IU.
Cream cheese	1 oz	1,450	IU.

Swiss cheese	*1 oz.*	*1,450 IU.*
Cream (whipping)	*1 tbsp.*	*1,440 IU.*
Cream (light)	*1 tbsp.*	*830 IU.*
Ice cream	*1 slice*	*520 IU.*

HERBS CONTAINING VITAMIN A

Alfalfa. Burdock. Cayenne. Dandelion. Garlic. Kelp. Marshmallow. Papaya. Parsley. Pokeweed. Raspberry. Red Clover. Saffron. Watercress. Yellow Dock.

Bee pollen is one high source of vitamin A, as well as essential amino acids, minerals and the nucleic acids, RNA and DNA.

NUTRITIONAL RESEARCH POINTS and ALARM POINTS ASSOCIATED WITH VITAMIN A

Refer to chart (B) for reference points.

The nutritional point associated with vitamin A is over the right eye only. This is a point researched by Dr. Robert Ridler, D.C. When painful to pressure (pressure that is uncomfortable to the eye (light to moderate pressure). May indicate need for vitamin A. Or the eye may feel irritated in some way.

The alarm reflex points are associated with muscles involved (Adductors, Gluteus Max. Min. and Med., Hamstrings, Latissimus Dorsi, Lungs, Psoas, Pectoralis Major Sternal Division, Popliteus, Rhomboids, Sacrospinalis, Sartorius and Trapezius (upper).

If there is a LACK OF ENERGY skin over reflex point will feel cool and LIGHT FINGER PRESSURE will cause pain. This is an indication that the meridian and or organ involved is HYPOFUNCTIONING or under active and needs stimulation and balancing.

You balance and or stimulate by using a light rapid clockwise rotation with your finger for 7 seconds and than stop for 7 seconds. Repeat until change noted over reflex point (less or lack of pain on light pressure).
This also indicates that there may be excessive alkalinity co ntration in the body and a balance between alkaline ash and acid ash foods should be attempted. The use of acid vitamins and minerals may also be of assistance at this time.

Acid vitamins are: Vitamin C with hesperin, rutin and bioflavinoids, folic acid, PABA, glutamic acid (a amino acid).
Acid minerals are: Orotate's, calcium, zinc, potassium, magnesium, phosphorous, sulfur, and potassium. Phosphorous and potassium may be used in both alkaline and acid conditions.

If there is EXCESS OF ENERGY skin over reflex point will fee hot and DEEP FINGER PRESSURE will cause pain. This is an indication that the meridian and or organ involved is HYPERFUNCTIONING or over active and needs sedation (calming down) and balancing.

You balance and or sedated by using a deep and sustained counter clockwise rotation with ball of the thumb for 12 seconds and than stop for 7 seconds. Repeat until change noted over reflex point (less or lack of pain on deep pressure).
This also may indicate that ther may be excessive acidity concentration in the body and or organ, and a balance between acid ash foods and alkaline ash foods should be attempted. The use of alkaline vitamins and minerals may also be of assistance at this time.

Alkaline vitamins are: B1, B2, B3 (niacin), B6, biotine, choline, inositol, and B12.
Alkaline minerals are: Calcium, phosphorous, zinc, magnesium, manganese, sodium, potassium, iron and iodine.

Note: The oil soluble vitamins A, D, E, F, and K are considered by many authorities to be anti-oxidants which assist in controling pH - acid-alkaline balance of the body.

Note: Continued.

Organ concentrates: If the organ system is determined to have energy in excess indicating a acid condition the use of raw gland concentrates can be helpful.

If the organ system is determined to have low energy indicating a alkaline condition the use of raw gland concentrates chelated with proper minerals can be helpful.

These concentrates used along with alkline-acid vitamins and minerals and investigating your diet to deterime its alkaline ash or acid ash content and balanced if necessary can be helpful. Refer to Acid alkaline ash foods and acid - alkaline values after digestion to assist in your diet investigation.

MUSCLES - MERIDIANS - DERMATONES and VERTEBRAE ASSOCIATED WITH VITAMIN A

MUSCLES	MERIDIAN	DERMATONE	Vertebrae Asso. Pt.
Adductors	Cir. Sex.	Lum. 2,3,4	Dor. 4/5
Gluteus Max. Min. & Med.	Cir. Sex.	Lum. 5,Sac.1,2	Dor. 4/5
Hamstrings	Large Int.	Lum. 5,Sac.1,2	Lum. 4/5
Latissimus Dorsi	Spleen/Pancreas	Cer. 6,7,Dor.1	Dor. 11/12
Lungs	Lung	Cer. 5,6	Dor. 3/4
Psoas	Kidney	Lum. 1,2,3,4	Lum. 2/3
Pectoralis Mj. Sternal Div.	Liver	Cer. 5,6,7,Dor.1	Dor. 9/10
Popliteus	Gall Bladder	Lum. 4,5,Sac.1	Dor. 10/11
Rhomboids	Stomach	Cer. 4,5	Dor. 12/Lum.1
Sacrospinalis	Bladder	Spine	Level of 2nd sac. foramen
Sartorius	Cir. Sex.	Lum.2,3,4	Dor. 4/5
Trapezius	Kidney	Cer. 2,3,4	Lum. 2/3

CODE: CHART REFERALS:

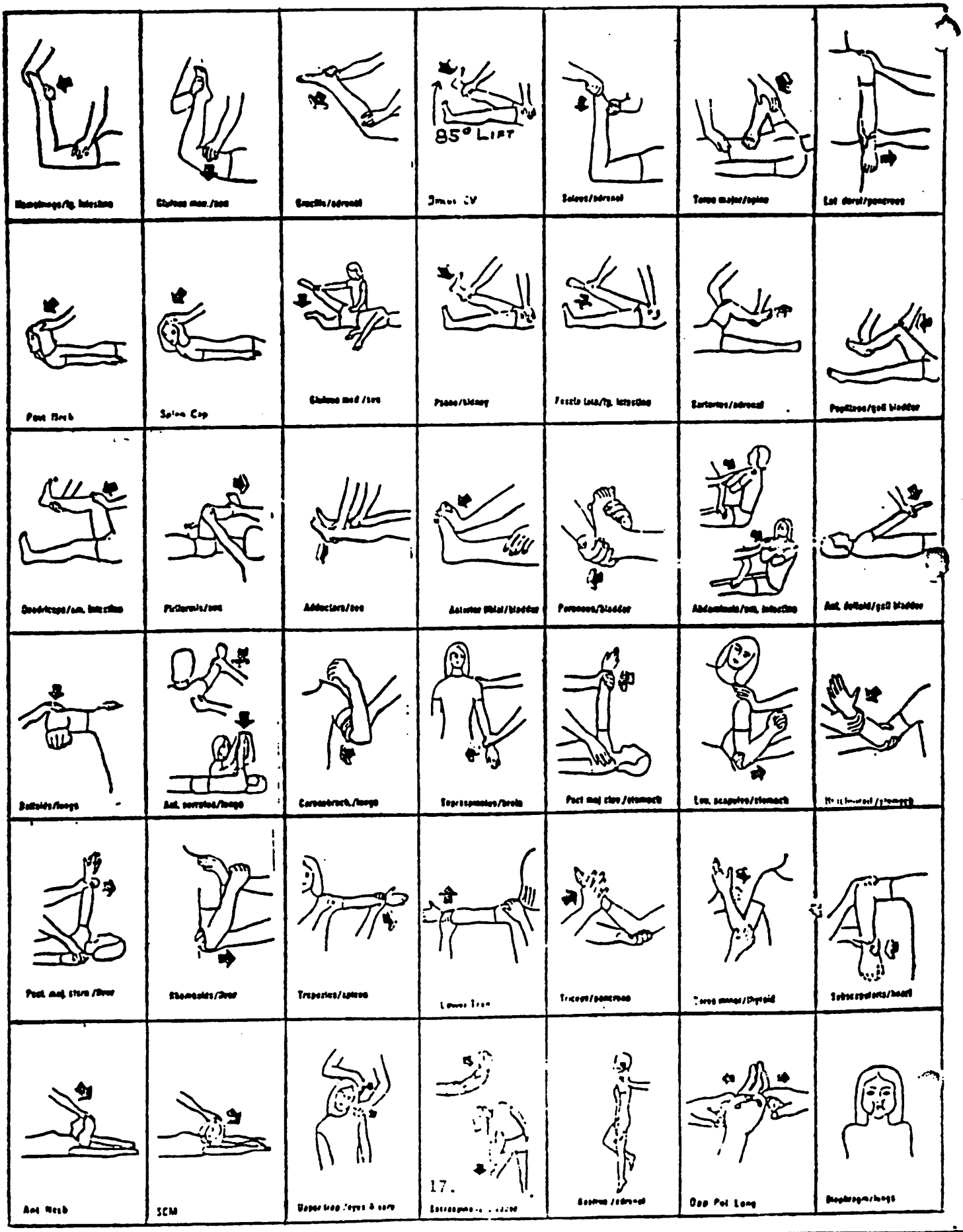
Muscles: Refer to muscle testing chart. (A)

Meridian: Refer to Alarm point chart (B).

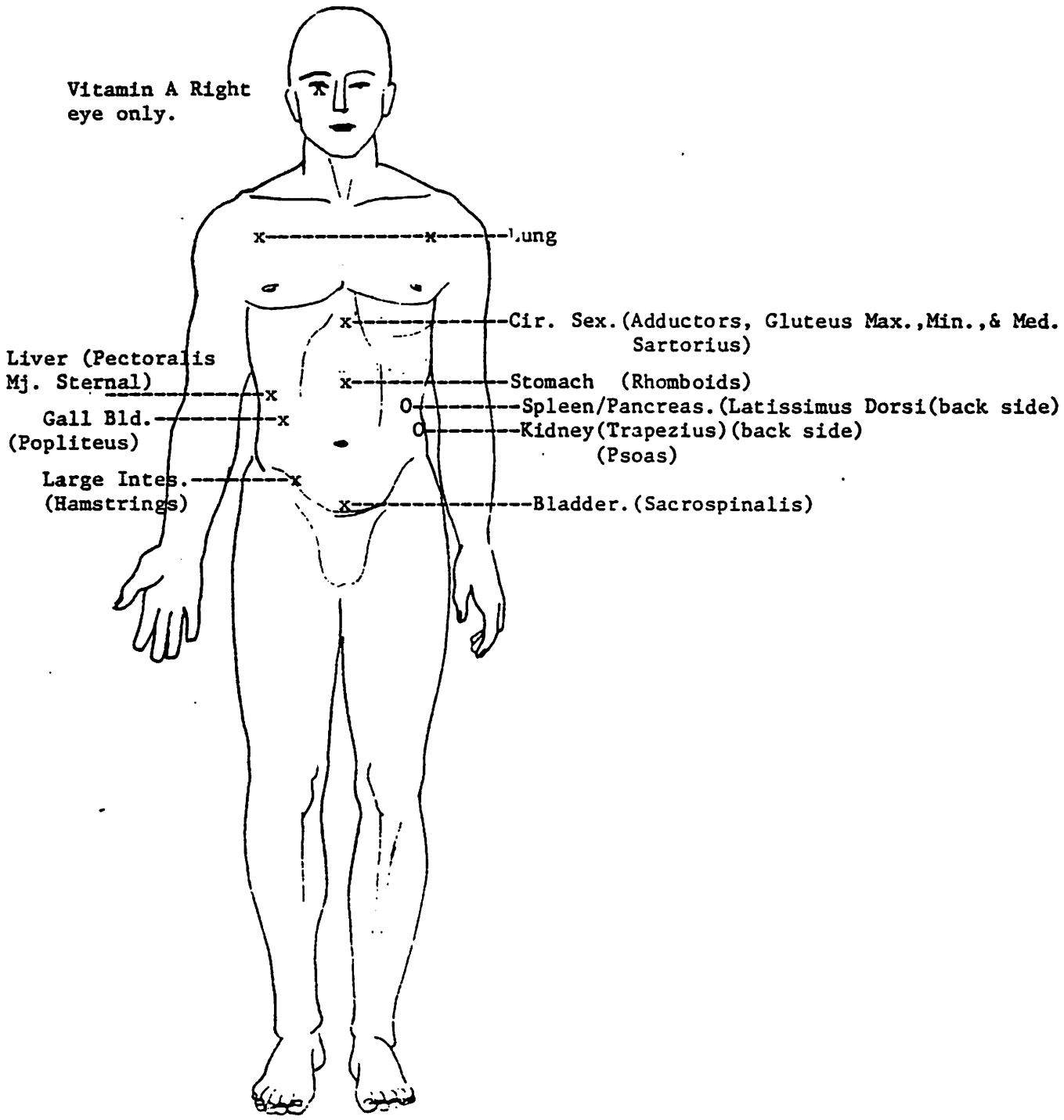
Dermotones: Refer to dermotomes chart (C).

NAME _____ MUSCLE TESTING CHART (A) Case # _____

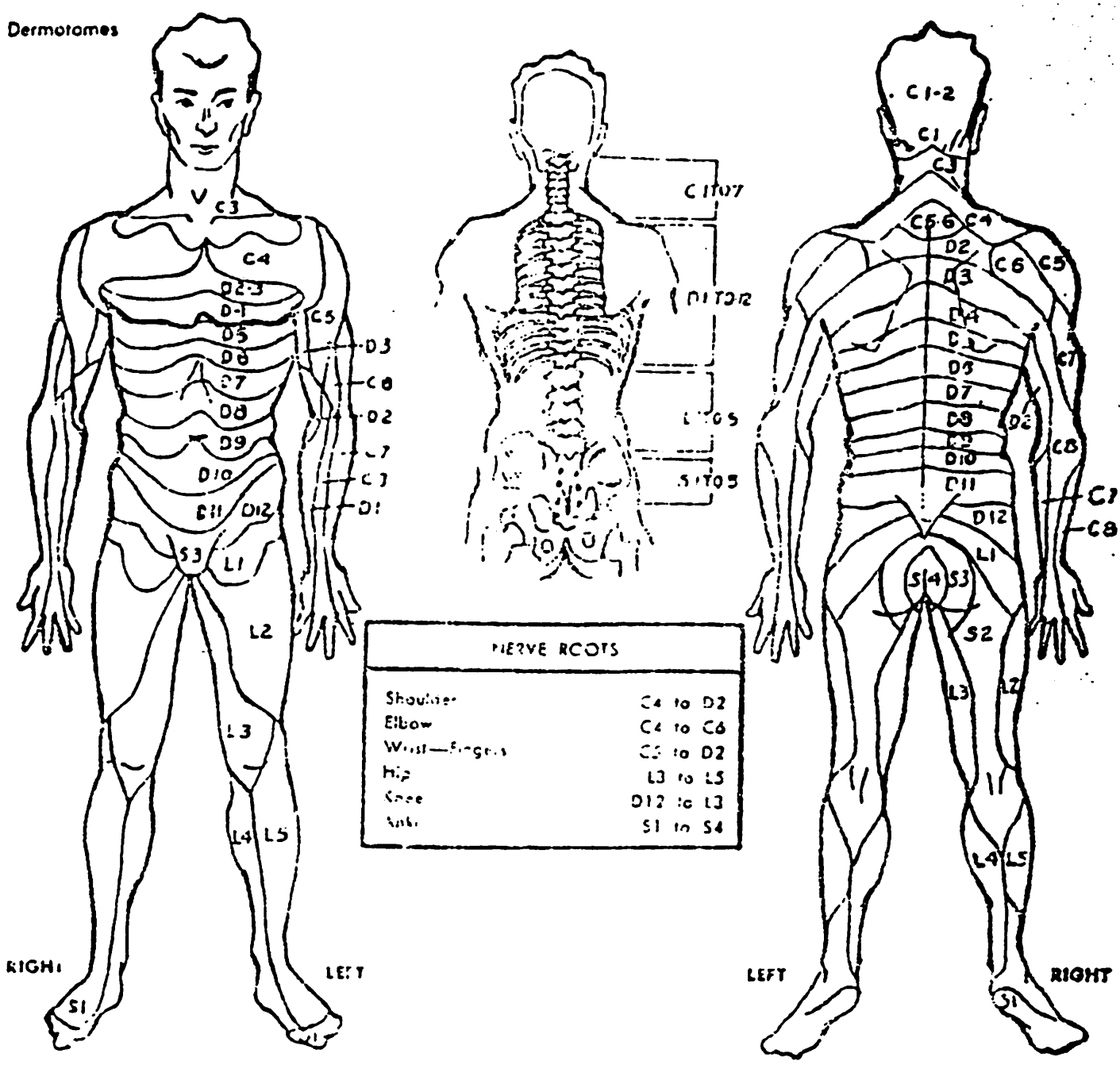
Date 1st exam _____ 2nd exam _____



ALARM POINT CHART (B)



DERMOTONES CHART (C)



NERVE ROOTS	
Shoulder	C4 to D2
Elbow	C4 to C6
Wrist—fingers	C5 to D2
Hip	L3 to L5
Knee	D12 to L3
Ankle	S1 to S4

These dermotones are areas of the skin that can be painful when muscles associated with vitamin A are involved or organ associated with muscles (they are listed under meridian) are involved.

ACID ALKALINE ASH FOODS

ACID - ALKALINE VALUES (pH) AFTER DIGESTION

ACID ALKALINE ASH FOODS

When foods are eaten they are oxidized (digested) in the body which results in the formation of either a acid ash or a alkaline ahs food. If the ash formation is composed primarily of these minerals SODIUM, POTASSIUM, CALCIUM and MAGNESIUM it is classified as a alkaline ash food. If the ash formation is composed primarily of these minerasl SULFUR, PHOSPHORUS, and CHLORINE and uncombusted (not digested ORGANIC ACID RADICAL, it is classified as a ash forming food.

CALCIUM

Decreases acidity and maintains proper alkalinity of blood. However, certain substances interfere with the absorption of calcium. (1) dietary fats; when they combine with calcium they form a insoluble compound which cannot be absorped. (2) oxalic acid; when it combines with calcium forms another insoluble compound that may form into stones (kidney, gall bladder) as well as interfering with absorption. (3) phytic acid; these are found in cereals and grains as well as flour made from grains. This also forms another insoluable compound that cannot be absorped. Cereals should set overnight covered with water, this water to be discarded the next morning and fresh water added (distilled water). Flours should be mixed and allowed to stand overnight to allow the enzymes contained in the flour to destroy the phytic acid. Than yeast may be added and again allowed to stand and work (raise) which also assist in destroying the phytic acid.

FOODS CONTAINING HIGH AMOUNTS OF CALCIUM LISTED IN ORDER OF CALCIUM CONTENT

Sesame seed (whole), Kelp, Irish moss, Dulse, Kale leaves, Turnip greens, Almond, Soybean dried, Filbert, Parsley, Dandelion greens, Brazilnut, Mustard greens, Watercress, Chickpea dried, White bean dried, Horseradish raw, Pinto bean dried, Pistachio nut, Hot red pepper dry, Fig dried, Sunflower seed, Beet greens, Wheat bran, Mung bean dried, Sesame seed (hulled), Olive ripe, Broccoli, Fennel, English-walnut, Rhubarb, Spinach, Okra, Prune dehydrated.

FOODS CONTAINING MODERATE AMOUNTS OF CALCIUM LISTED IN ORDER OF CALCIUM CONTENT

Swiss chard, Chicory greens, Endive, Lentil dried, Rice bran, Cowpea dried, Pecan, Lima bean dried, Wheat germ, Chive, Peanut with skin, Rice polich, Lettuce looseleaf, Apricot dried, Rutabaga, Pea dried, Raisin, Pea edible pod, Olive green, Horseradish prepared, Black currant, Date, Peanut no skin, Green snap bean, Yellow snap bean, Chestnut dried, Leek, Lima bean fresh, prune dried, Pumkin seed, Squash seed, Artichoke globe, Onion green, Parsnip,

FOODS CONTAINING LOW AMOUNTS OF CALCIUM LISTED IN ORDER OF CALCIUM CONTENT

Cabbage, Peach dried, Winter wheat hard, Chinese cabbage, Celeriac, Winter wheat soft, Kohlrabi, Tangerine, Celery, Turnip, Elderberry, Cashew nut, Rye grain, Carrot, Shallot, Wheat Durim, Brussels sprouts, Wheat hard spring, Wheat white,

LOW AMOUNTS OF CALCIUM CONTINUED

Fig dried, Pear dried, Barley Scotch pearled, Lime, Banana dried, Blackberry, Currant, Sweet potato, Brown rice, Apple dried, Black raspberry, Radish, Garlic, Hot red pepper raw, Summer squash, Sorghum grain, Chestnut fresh, Onion dry mature, Cowpea fresh, Lemon peeled, Coconut meat dried, Pea fresh green, Cauliflower, cucumber, White rice, Guava, Sour red cherry, Sweet cherry, Red raspberry, Asparagus, Winter squash, Strawberry, Pumpkin, Papaya, Coconut water, Iceberg lettuce, Yam, Millet, Mung bean sprouts, Wild rice, Tangerine juice, Chicory, Apricot fresh, Pineapple, Grapefruit pulp, Grapes American, Coconut milk, Beet, Blueberry, Cranberry, Cantaloupe, Casaba melon, Honeydew melon, Jerusalem artichoke, Coconut meat, fresh, Bamboo shoots, Sweet red pepper, Tomato, Acerola cherry, Grapes, European, Japanese plum, Pinon nut, Eggplant, Quince, Orange juice, Acerola juice, Avocado Calif., Avocado Florida, Red banana, Mango, Hot green pepper, Banana, Pear fresh, Apple, Lemon juice, Plantain, Watermelon, Potato with skin, Apple juice, Crabapple, Mushroom, Nectarine, Waterchestnut Chinese, Sweet corn.

HERBS CONTAINING CALCIUM

Shave grass, Cleavers, Meadowsweet, Coltsfoot, Burnet root, Chamomile, Plantain, Mistletoe, Shephed's purse, Dandelion root, Dill see, Caraway seed, Nettle, Poppy seed, Watercress, Rhubarb root, Horseradish root.

MAGNESIUM

Magnesium helps in the utilization of fat in the diet. At least half of the magnesium in the body is combined with calcium and phosphorus in the bones. The tissue reaction is alkaline ash.

FOODS CONTAINING HIGH AMOUNTS OF MAGNESIUM LISTED IN ORDER OF MAGNESIUM CONTENT

Kelp, Wheat bran, Wheat germ Almond, Cashew nut, Dried soybean, Dried cowpea, Brazilnut, Dulse, Peanut, Black walnut, Filbert, Sesame seed whole, Dried lima bean, Dried white bean, Dried red bean, Millet, Hickory nut. Wheat grain, Pistachio nut, Pecan, Dried banana, English walnut, Wild rice, Rye grain, Beet green, Dry coconut meat, Spinach, Brown rice, Dried lentil, Dried figs, Fresh lima bean, Swiss chard, Dried apricot, Date, Turnip greens, Collard leaves, Fresh cowpea.

FOODS CONTAINING MODERATE AMOUNTS OF MAGNESIUM LISTED IN ORDER OF MANGNESIUM CONTENT

Dried peach, Sweet corn, Fresh coconut meat, Calif. avocado, Florida avocado, Fresh chestnut, Okra, Parsley, Dried prune, Sunflower seed, Kale, Kohlrabi, Scotch pearled barley, Dandelion greens, Garlic, Raisin, Fresh pea, Raw horseradish, Potato with skin, Banana, Red banana, Chive, Parsnip, Snap bean, Dried pear, Sweet potato, Blackberry, Black raspberry.

FOODS CONTAINING LOW AMOUNTS OF MAGNESIUM LISTED IN ORDER OF MANGNESIUM CONTENT

Brussels sprouts, White rice, Mustard greens, Beet, Broccoli, Cauliflower, Carrot, Leek, Dried apple, Olive green, Celery, Fresh figs, Red raspberry, Asparagus, Turnip, Watercress, Mango, Sweet green pepper, Winter squash, Cantaloupe, Eggplant, Rhubarb, Summer squash, Black currant, Red currant, White currant, Radish, Rutabaga, Sour red cherry, Chinese cabbage, Tomato, American grapes, Guava, Nectarine, Pineapple, Cabbage, Fresh Apricot, Grapefruit pulp and juice, Strawberry, Mature dry onion, Pumpkin, Peeled orange, Iceberg lettuce, fresh peach Endive, Plum, Apple, Cranberry, Lemon juice, Watermelon, Fresh pear, Blueberry, European grapes, Apple juice.

HERBS CONTAINING MANGESIUM

Chicory, Mushroom, Chinese waterchestnut, Cress, Jerusalem artichoke, Parsley

POTASSIUM

Potassium aids to balance the acids in the tissue cells and assists in maintaining different elements in their proper solution. Potassium also assist the body in the formation of glycogen (sugar) from the liver, muscles, cartilages and other tissues. The chemical reaction of potassium is alkaline forming to the tissues.

FOODS CONTAINING HIGH AMOUNTS OF POTASSIUM LISTED IN ORDER OF POTASSIUM CONTENT

Dulse, Kelp, Dried soybean, Dried lima bean, Rice bran, Dried banana, Dry hot red pepper, Dried white bean, Wheat bran, Dried mung bean, Dried cowpea, Dried pea, Dried pinto bean, Dried red bean, Dried apricot, Pistachio nut, Dried peach, Dried prunes, Sunflower seed, Dried chestnut, Wheat germ, Dried chickpea, Dried lentil, Almond, Raisin, Parsley, Whole sesame seed, Brazilnut, Rice polish, Filbert, Dried prune, Peanut, Fresh lima bean, Date, Dried fig, Calif. avocado, Florida avocado, Pecan, Yam, Dry coconut meat, Dried pear, Beet greens, Dried apple, Raw horseradish, Swiss chard, Parsnip, Fresh cowpea, Bamboo shoots, Garlic, Spinach, Rye grain, Cashew nut, Black walnut, Fresh chestnut, English walnut, Collard leaves, Durim wheat, Globe artichoke, Millet, Potato with skin, Brussels sprouts, White wheat, Broccoli, Kale, Soft winter wheat, Black currant, Kohlrabi, Banana, Hard summer wheat, Hard winter wheat, Winter squash, Sorghum grain, Leek, Carrot, Celery, Pumpkin, Beet, Shallot, Radish, Fresh green pea, Elderberry, Celeriac, Scotch pearled barley, Endive, Prepared horseradish, Guava, Fresh apricot, Sweet corn, Asparagus, Red cabbage, Turnip, Macadamia nut, Boston Bibb lettuce, Looseleaf lettuce, Red currant, White currant, Fresh coconut meat, Cantaloupe, Casaba melon, Honeydew melon, Rhubard, Okra, Tomato, Seeet potato, Snap bean, Rutabaga, Kumquat, Papaya, Cabbage, Green olive, Mung bean sprouts, Wild rice, Eggplant, Brown rice, Sweet green pepper, Orange peel, Fresh peach, Summer squash, Peeled orange.

FOODS CONTAINING MODERATE AMOUNTS OF POTASSIUM LISTED IN ORDER OF POTASSIUM CONTENT

Black raspberry, Quince, Orange with peel, Fresh fig, Cherry, Mango, Tangerine juice, Iceberg lettuce, European grapes, Edible podded pea, Blackberry, Loganberry, Red raspberry, Strawberry, Grapefruit juice, Cucumber, American grapes, Dry mature onion, Gooseberry, Pineapple, Lemon with peel, Lemon juice, Lemon peeled, Grapefruit pulp, Fresh pear, Tangerine, Apple, Crabapple, Lime juice, Lime Apple juice Watermelon.

FOODS CONTAINING LOW AMOUNTS OF POTASSIUM LISTED IN ORDER OF POTASSIUM CONTENT

White rice, Acerola cherry, Cranberry, Blueberry, Green olive, Ripe olive.

HERBS CONTAINING POTASSIUM

HERBS CONTAINING POTASSIUM CONTINUED

Irishmoss, Cress, Chinese waterchestnut, Chicory greens, Mushroom, Dandelion greens, Fennel, Plantain, Salsify, Mustard greens, Dock, Chinese cabbage, Chive, Watercress, Chicory, Swamp cabbage, Walnut leaves, Mistletoe, Chamomile, Summer savory, Birch bark, Nettles, Borage, Couch grass, Primrose flowers, Dandelion, Calamus, Plantain Colsfoot, Centaury, Eyebright, Carrot leaves, Oak bark, Sanicle, Fennel, Comfrey, Mullein, Yarrow, Alfalfa, Mint, Nuts, Parsley, Watercress, Horseradish, Rhubarb.

SODIUM

Sodium deficiency is very improbable because of the wide spread use of table salt, which is approximately 43 percent sodium. It is found in the fluids outside of the body cells and within the bone structures.

FOODS CONTAINING HIGH AMOUNTS OF SODIUM LISTED IN ORDER OF SODIUM CONTENT

Kelp, Irishmoss, Green pickled olives, Dulse, Ripe olives, Dry hot red pepper, Swiss chard, Beet greens, Celery, Celeriac, Prepared horseradish, Dandelion greens, Kale, Spinach, Beet, Whole sesame seed, Watercress, Turnip, Carrot, Parsley, Globe artichoke, Collard leaves, Dried cowpea, Dried pea, Dried fig, Mustard greens, Dried lentil, Sunflower seed, Raisin, Dried apricot, Red cabbage, Dried chickpea, Fresh coconut, Chinese cabbage, Chinese waterchestnut, Cabbage.

FOODS CONTAINING MODERATE AMOUNTS OF SODIUM LISTED IN ORDER OF SODIUM CONTENT

Garlic, Dried white bean, Radish, Dried peach, Cashew nut, Broccoli, Mushroom, Brussels sprouts, Cress, Endive, Cauliflower, Sweet green pepper, Cantaloupe, Honeydew melon, Dried chestnut, Parnsip,Shallot, Dried prune, Dried pinto bean, Dried red bean, Dried mature onion, Sweet potato.

FOODS CONTAINING LOW AMOUNTS OF SODIUM LISTED IN ORDER OF SODIUM CONTENT

Lettuce, Brown rice, Wheat bran, Acerola cherry, Dried prune, Raw horseradish, Kohlrabi, Mango, Dried pear, Chicory, Snap bean, Wild rice, Nectarine, Fresh chestnut, Dried mung bean, Cucumber, Mung bean sprouts, Dried apple, Plantain, Dock, Leek, Green onion, Rutabaga, Peanut, Dried soybean, White rice, Calif. avocado, Florida avocado, Banana dried, Guava, Quince, Almond, Dried lima bean, Okra, Potato-with skin, Tomato, Acerola juice, Black currant, Grapes, Lemon with peel, Orange peel, Papaya, Black walnut, Wheat grain, Wheat germ, Cherry, Cranberry, Red currant, White currant, Fresh fig, Lemon pelled, Lime, Orange with peel, Fresh pear, Tangerine, Filbert, English walnut, Asparagus, Eggplant, Rhubarb, Fresh lima bean, Fresh cowpea, Fresh green pea, Fresh apple, Apple juice, Fresh apricot, Banana, Red banana, Blackberry, Blueberry, Crabapple, Date, Gooseberry, Grapefruit pulp, Grapefruit juice, Lemon juice, Lime juice, Loganberry, Orange peeled, Orange juice, Fresh peach, Pineapple, Japanese plum, Prune type plum, Balck raspberry, Strawberry, Tangerine juice, Watermelon, Barazilnut, Pumpkin, Summer squash, Winter squash, Rye grain.

HERBS CONTAINING SODIUM

Kelp, Irishmoss, Dulse, Dandelion greens, Watercress, Parsley, Cress, Chicory, Wild rice, Plantain, Dock, Leek, Lychee, Meadow sweet, Mistletoe, Nettle, Cleavers, Black willow, Fennel, Alfalfa, Parsley, Dill, Apple tree bark, Anise seed, Celery seed, Huckleberry leaves, Shepherd's purse, Watercress, Dandelion root, Rhubarb root, Sorrel (Dock).

ACID ASH FOODS

SULFUR

PHOSPHORUS

CHLORINE

SULFUR

Is present in all body cells and plays a very imprtant role in the body, however, not in a inorganic form in a complex organic form. It is found in B vitamins especially B1, and Biotin and essential for their function. Sulfur obtained from food sources is organic in nature principally as a constituent of proteins. Sulfur useful in the formation of blood hemoglobin, in detoxifying (making harmless poisonous substances in the blood stream), assists in tissue respiration. The tissue reaction to sulfur is acid forming.

FOOD CONTAINING HIGH AMOUNTS OF SULFUR LISTED IN ORDER OF CALCIUM CONTENT

Kale, Watercress, Brussel sprouts, Horseradish, Cabbage, Cranberry, Dock, Snap bean, Turnip, Cauliflower, Raspberry, Spinach, Red cabbage, Kelp, Parsnip, Leek, Kohlrabi, Radish, Okra, Cucumber, Swiss chard, Looseleaf, lettuce, Iceberg lettuce, Chive, Celery, Fresh green pea, Red currant, Salsify, Boston Bibb lettuce, Asparagus, Rutabaga, Avocado, Ripe tomato, Black currant, Filbert, Carrot, Eggplant, Turnip greens, Brazilnut, Pineapple, Sweet corn, Dried cowpea, Fresh peach, Fresh lima bean, Dried chestnut, Celeriac, Potato, Dandelion greens, Chicory, Jerusalem artichoke, Dried fig, Dry mature onion, Dried soybean, Globe artichoke, Dried lima bean, Raisin, Mushroom, Barley, Rhubarb, Lime Watermelon, Strawberry, Apple, Orange.

FOODS CONTAINING MODERATE AMOUNTS OF SULFUR LISTED IN ORDER OF SULFUR CONTENT

Cherry, Pumpkin, Gooseberry, Dried apricot, Grapes, Mango, Fresh pear, Blueberry, Dried white bean, Lemon, Banana, Date Dried lentil, Dried chickpea, Guava, Sweet potato, Plum, Beechnut, Dried pea, Grapefruit.

FOODS CONTAINING LOW AMOUNTS OF SULFUR LISTED IN ORDER OF SULFUR CONTENT

Almone, Fresh apricot, Balckberry, Sunflower seed, Dried prune, Fresh coconut meat, Beet, Watercress, Rye grain, English walnut, Wheat bran, Rice bran, Sorghum grain, Brown rice, Wheat grain, White rice.

HERBS CONTAINING SULFUR

Watercress, Dock, Leek, Salsify, Dandelion, greens, Chicory, Jerusalem artichoke, Mushroom, Scouring rush, Meadow sweet, Plantain, Eyebright, Shepherd's purse, Burnet root, Broom, Rest harrow, Calamus, Coltsfoot, Fennel, Nettle, Silverweed, Horseradish root,

PHOSPHORUS

It is an important mineral used in the utilization of carbohydrates, fats, and proteins. Used for growth, repair and maintenance of cells and production of energy. Phospholipid compounds such as lecithin assists in the break up and transportation oftats and tatty acids and are found everywhere in the tissues, lymph, as well as in the other liquids of the body but most important it is found in the white matter of the nerves as well in abundance in the gray matter of the brain (approximately 16 to 18 percent) being associated with the superior mental functions of the brain. The chemical reaction of phosphorus is acid forming to the tissues.

FOODS CONTAINING HIGH AMOUNTS OF PHOSPHORUS LISTED IN ORDER OF PHOSPHORUS CONTENT

Rice bran, Wheat bran, Pumpkin seed, Squash seed, Wheat germ, Rice polish, Sunflower see, Brazilnut, Safflower seed, Whole sesame seed, Pinon nut, Hulled sesame seed, Black walnut, Dried soybean, Almond, Pistachio nut, Dried pinto bean, Dried cowpea, Dried white bean, Peanut no skin, Dried red bean, Peanut with skin, Soft winter wheat, White wheat, Dried lima bean, Durim wheat, Spring hard wheat, English walnut, Dried lentil, Rye grain, Cashew nut, Hickory nut, Hard winter wheat, Dried mung bean, Dried pea, Wild rice, Filbert, Dried chickpea, Millet, Scotch pearled barley, Pecan, Sorghum grain, Dulse, Hot red pepper dry, Kelp, Brown rice, Garlic, Dry coconut meat, Fresh cowpea, Dried chestnut, Macadamia nut, Fresh lima bean, Dried peach, Mushroom, Fresh green pea, Celeriac, Sweet corn, Dried Apricot, Dried prune, Dried banana, Raisin, Fresh coconut meat, White rice, Kale, Edible pea in the pod.

FOODS CONTAINING MODERATE AMOUNTS OF PHOSPHORUS LISTED IN ORDER OF PHOSPHORUS CONTENT

Fresh chestnut, Globe artichoke, Collard leaves, Brussels sprouts, Dried prunes, Broccoli, Jerusalem artichoke, Raw hot red pepper, Dried fig, Parsnip, Yam, Soybean sprouts, Dandelion greens, Raw horseradish, Mung bean sprouts, Date, Parsley, Asparagus, Shallot, Turnip greens, Cauliflower, Endive, Watercress, Potato with skin, Dried Apple, Kohlrabi, Okra, Spinach, Leek, Mustard greens, Dried pear, Sweet potato, Pumpkin, Green snap bean, Yellow snap bean, Avocado, Guava, Black currant, Chinese cabbage, Swiss chard, Green onion, Rutabaga, Winter squash, Carrot, Dry mature onion, Red cabbage, Beet, Prepared horseradish, Radish, Sweet red pepper, Turnip, Cabbage, Summer squash, Elderberry, Celery, Cucumber, Tomato, Banana, Eggplant, Lettuce Boston Bibb, Lettuce looseleaf, Hot green pepper, Nectarine, Fresh apricot, Red currant, White currant, Kumquat, Fresh fig, Orange with pee, Raspberry, Iceberg lettuce, Sweet green pepper, Strawberry, European grapes, Peeled orange.

FOODS CONTAINING LOW AMOUNTS OF PHOSPHORUS LISTED IN ORDER OF PHOSPHORUS CONTENT

Balckberry, Cherry, Fresh peach, Red banana, Lime, Japanese plum, Prune type plum, Rhubarb, Tangerine, Loganberry, Green pickled olive, Mission ripe olive, Orange juice, Grapefruit pulp, Peeled lemon, Cantaloupe, Casaba melon, Honeydew melon, Papaya, Gooseberry, Brapefruit juice, Lemon with peel, Tangerine juice, Blueberry, Crabapple, Mango, American grapes, Acerola cherry, Lime juice, Fresh pear, Quince, Apple, Cranberry, Lemon juice, Watermelon, Acerola juice, Apple juice, Pineapple.

HERBS CONTAINING PHOSPHORUS

Irishmoss, Cress, Chinese waterchestnut, Bamboo shoots, Fennel, Chive, Dock, Chicory greens, Purslane leaves, Plantain, Chicory, Calamus, Licorice, Caraway seed, Marigold flowers, Chickwee, Meadowsweet, Dandelion, Dill seed, Rhubarb root, Watercress, Hores radish root, Garlic.

CHLORINE

Chlorine is a general cleanser, assists in expelling waste matter, blood cleanser and has a tendency to reduce excessive fatty acumulations in the body. Diets that are abundent in sodium and potassium are usually provide adequate amounts of chlorine. The acid ash reaction as we have said is acid forming to the tissues.

FOODS CONTAINING HIGH AMOUNTS OF CALCIUM LISTED IN ORDER OF CHLORINE CONTENT

Ripe tomato, Celery, Iceberg lettuce, Kelp, Spinach, Red cabbage, Kale leaves, Cabbage, Parsnip, Radish, Celeriac, Turnip, Raw Horseradish, Watercress, Swiss chard, Lettuce looseleaf, Snap bean, Rhubarb, Eggplant, Cucumber, Avocado Florida, Avocado Calif., Lettuce Bibb, Sweet potato, Asparagus, Kohlrabi, Date, Dandelion greens, Coconut fresh, Carrot, Cauliflower, Leek, Beet, Red raspberry, Brussels sprouts, Chicory, Banana, Pineapple, Lime, Chive, Raisin, Jerusalem artichoke, Globe Artichoke, Blackberry, Guava, Mango, Potato with skin, Dried lentil, Fresh green peas, Mature dry onion, Sweet conr, Strawberry, Watermelon, Beehcnut, Rutabaga, Dried Figs.

FOODS CONTAINING MODERATE AMOUNTS OF CHLORINE LISTED IN ORDER OF CHLORINE CONTENT

Dried chickpea, Sunflower seed, Brazilnut, Fresh peach, Dried white bean, Filbert, Dried pea, Fresh lima bean, Cherry, Grapefruit pulp, Dried soybean, Grapes, Barley, Red currant, White current, Pumpkin, Orange, Sorghum grain, Peanut, Fresh apricot.

FOODS CONTAINING LOW AMOUNTS OF CHLORINE LISTED IN ORDER OF CHLORINE CONTENT

Lemon, Chinese waterchestnut, English walnut, Drie prunes, Black currant, Wheat grain, Almond, Dried lima beans, Cranberry, Brown rice, Dried chestnut, White rice, Rye grain.

HERBS CONTAINING CHLORINE

Golden seal, Fennel, Myrrh, Mistletoe, Nettle, Dill see, Celery seed, Plantain, Uva ursi, Wintergreen, Dandelion root, Horseradish root, Rhubarb root.

ACID - ALKALINE VALUES (pH) AFTER DIGESTION

Fruit acids CITRIC, MALIC, and TARTARIC are alkaline after digestion and are necessary for the elimination of various toxins, acids and other metabolic impurities. Germs, and bacteria have difficulty surviving in fruit juices containing CITRIC, MALIC and TARTARIC ACIDS. They seem to have a powerful germicide effect.

The number following the listed food is the acid alkaline (pH) reaction to the body. The pH values run from 0 to 14. The number 0 indicating a strong acidity; the number 7 indicating neutrality; and the number 14 indicating strong alkalinity.

When foods are eaten they are oxidized (digested) in the body which results in the formation of either a ACID ASH or a ALKALINE ASH food. If this ASH formation consists primarily of CALCIUM, SODIUM, POTASSIUM and MAGNESIUM it is considered a ALKALINE ASH food. If this ASH formation consists primarily of SULFUR, PHOSPHORUS, and CHLORINE and uncombusted (not digested) ORGANIC ACID RADICALS it is classified as a acid ash forming food.

Those foods containing OXALIC ACID when cooked bind calcium making it difficult to absorb. It forms calcium oxalate which is insoluble and cannot be used by the body. However, OXALIC ACID from raw foods in moderation is used by the body to maintain the tone of the intestines and assists in stimulating peristalsis (bowel action). The organic OXALIC ACID from foods combines with organic calcium to form a beneficial constructive nutrient which assists the digestive elimination of calcium via the bowel route and at the sametime stimulates peristalitic activity. Assists in keeping the intestinal system clean from toxins and excessive food material.

If, however these foods containing OXALIC ACID are cooked it becomes a inorganic compound which combines with calcium in other foods. This compound does not assist the peristalic activity which may result in a mucous buildup in the intestinal tract and or fermentation or putrifaction (toxic fermentation) This inorganic compound (OXALIC ACID CRYSTALS that are bound with calcium CALCIUM OXALATE CRYSTALS) may become trapped in the kidneys and form kidney stones.

FOODS CONTAINING HIGH AMOUNTS OF CITRIC ACID LISTED IN ORDER OF CITRIC ACID CONTENT AND pH VALUE OF FOOD AFTER DIGESTION (ACID - ALKALINE REACTION TO BODY).

Lemon Juice (4.0), Lemon (7.7), Lime juice (2.0), Blueberry (3.4), Grapefruit (6.4) Red raspberry (5.7), Strawberry(2.6), Orange (7.1) Orange juice (4.5), Pineapple (5.8) Lima bean fresh (14.0), Potato (7.2), Rhubarb (10.2), Tomato ripe (8.3), Fresh peach (8.2), Dried peach (12.1), Fresh apricot (6.6), Dried apricot (36.6), Kale (10.5), Fresh fig (5.1), Dried fig (43.7), Wheat grain (10.9), Fresh pear (3.4), Brussels sprouts (4.3), Banana (6.0), Broccoli (4.2), Cauliflower (3.2), Cabbage (6.2), Parsnip (8.6), Fresh green pea (1.3), Asparagus (.1), Beet (11.1), Globe artichoke (4.3), Carrot (10.2), Spinach (15.8), Sweet potato (6.7), Snap bean (4.8), Iceberg lettuce (7.7), Okra (4.5), Apple (2.2), Blackberry (7.3), Celery (8.1), Cucumber (14.2)

NEUTRAL FOODS THOSE FOODS THAT HAVE A NEUTRAL REACTION TO THE BODY LISTED IN ORDER OF THEIR NEUTRAL RESPONSE TO BODY TISSUES

Aspargus (.1), Shinese waterchestnut (.2), Sorghum grain (.8), Blueberry (1.4), Filbert (2.1), Brazilnut (3.2), Green pickled Olive (3.8), Globe artichoke (4.3), Dried white bean (4.3), White rice (7.8), English walnut (8.5), Jerusalem artichoke (10.3), Lentil (10.5), Peanut (10.6), Wheat grain (10.9), Rye grain (11.3)

FOODS CONTAINING HIGH AMOUNTS OF MALIC ACID LISTED IN ORDER OF MALIC ACID CONTENT AND pH VALUE OF FOOD AFTER DIGESTION (ACID - ALKALINE REACTION TO BODY).

Plum (8,2), Rhubarb (10.2), Prune (20.3), Gooseberry (5.5), Qince (4.9), Sweet cherry (7.3), Grapes (2.7), Dried apricot 36.6), Apple (2.2), Cauliflower (3.2), Banana (6.0) Fresh peach (12.1), Parsnip (8.6), Lemon juice (4.0), Lemon (7.7), Carrot(10.2) Cucumber (14.2), Turnip (6.5), Watermelon (2.2), Brussels sprouts (4.3), Globe artichoke (4.3), Celery (8.1), Eggplant (4.5), Iceberg lettuce (7.7), Dry mature onion (8.4) Fresh lima bean (14.2), Blackberry (4.3), Pumpkin (3.2), Mushroom (4.9), Strawberry (2.6), Snap bean (4.8), Fresh pear (3.4), Pineapple (5.8), Broccoli (4.7), Okra (4.5), Ripe tomato (8.3), Blueberry (1.4), Asparagus (.1), Cabbage (6.2), Orange (7.1), Orange juice (4.9), Spinach (15.8), Grapefruit (6.4), Fresh green pea (1.3) Dried pea (7.4), Kale (10.5), Dried fig (43.7), Lemon (7.7), Lemon juice (4.0).

FOODS CONTAINING HIGH AMOUNTS OF OXALIC ACID LISTED IN ORDER OF OXALIC CONTENT AND pH VALUE OF FOOD AFTER DIGESTION (ACID - ALKALINE REACTION TO BODY).

Spinach (15.8), Swiss chard (20.4), Rhubarb (10.2), Almon (13.5), Beet (11.1), Lime (2.0), Gooseberry (5.5), Lemon peel (8.5), Celery (8.1), Sweet potato (6.7), Raspberry (5.7), Okra (4.5), Snap bean (4.8), Carrot (10.2), Endive (9.6), American grapes (2.8), Dandelion green (17.5), Orange (7.1), Orange juice (4.5), Strawberry (2.6), Blackberry (7.7), Blueberry (1.4), Grapefruit (6.4), Fresh apricot (6.6), Dried apricot (35.6), Kale leaves (10.5), Plum (8.2), Parsnip (8.6), Cabbage (6.2), Ripe tomato (8.3), Iceberg lettuce (7.7), Eggplant (4.5), Banana (6.0), Brussels sprouts (4.3), Dried prune (20.3), Potato (7.2), Cress (2.3), Asparagus (.1), Sweet corn (1.3), Fresh pear (3.4), Fresh peach (8.2), Dried peach (12.1), Turnip (6.5), Sour red cherry (4.1).

FOODS CONTAINING HIGH AMOUNTS OF SULFUR LISTED IN ORDER OF SULFUR CONTENT AND pH VALUE OF FOOD AFTER DIGESTION (ACID - ALKALINE REACTION TO BODY).

SULFUR FOODS CONTINUED.

Kale (10.5), Watercress (8.1) Brussels sprouts (4.3), Raw horseradish (4.2), Prepared horseradish (3.5), Cabbage (6.2), Snap bean (4.8), Tunrip (6.5), Cauliflower (3.2), Raspberry (5.7), Spinach (15.8), Red cabbage (3.9), Parsnip (8.6), Radish (4.8), Okra (4.5), Cucumber (14.2), Swiss chard (20.4), Looseleaf lettuce (7.0), Iceberg lettuce (7.7), Chive (10.4), Celery (8.1), Fresh green pea (1.3), Boston Bibb lettuce (5.9), Asparagus (.1), Rutabaga (8.5), Avocado (10.7), Ripe tomato (8.3), Filbert (2.1), Carrot (10.2), Eggplant (4.5), Brazilnut (3.2), Pineapple (5.8), Sweet corn (1.3), Fresh peach (8.2), Dried peach (12.1), Fresh lima bean (14.0), Dried chestnut (9.1), Potato (7.2), Dandelion greens (17.5), Chicory (3.2), Jerusalem artichoke (10.3), Dried fig (43.7), Dry mature onion (8.4), Globe artichoke (4.3), Dried lima beans (41.6), Raisin (25.3), Mushroom (4.9), Rhubarb (10.2), Lime juice (2.0), Watermelon (2.2), Strawberry (2.6), Apple (2.2), Orange (7.1), Orange juice (4.5), Cherry sour (4.1), Pumpkin (3.2), Dried apricot (25.3) Fresh apricot (6.6), Grapes (2.7), Fresh pear (3.4), Blueberry (1.4), Dried white bean (4.3), Lemon (7.7), Lemon with peeo (8.5), Banana (6.0), Sweet potato (6.7), Dried prune (20.3), Fresh coconut meat (6.0), Beet(11.1), Rye grain (11.3), English walnut (8.5), Sorghum grain (.8), Wheat grain (10.9), White rice (7.8)

ANIMAL PROTEIN - POULTRY - FISH - SEA FOOD - DAIRY PODUCTS - CEREALS - FLOURS pH VALUES.

Beef (3.0), Lamb (3.0), Veal (3.3), Pork (3.3), Liver (3.0), Kidney (3.2), Heart (3.3), Mutton (3.3), Bacon (3.0).

Chicken (3.2), Goose (3.0), Duck (3.0), Turkey (3.0).

Oyster (4.5), Lobsters (4.0), Sardines (3.4), Crabs (4.5), Shrimp (3.3), Haddock (2.5), Herring (smoked) 5.5), Fresh fish (3.3), Frog (3.3).

Eggs (3.0). Egg white (1.7), Egg yolk (7.5), American cheese (1.5).

Cereals in general (3.0), Barley (3.0), Dry corn (1.7), Corn meal (1.6), Corn flakes (1.6),

Corn bread (1.6), White bread (2.2), Whole wheat bread (2.2), Crackers (2.3) Soda crackers (1.0), Zwieback (1.6), Macaroni (3.0), Spaghetti (2.0)

Buttermilk (0.7), Whole milk (0.5), Ice cream (0.1)

Molasses (18.0)

TARTARIC ACID CONTAINING FOODS

Tartaric acid is contained in pineapples and grapes. Seems to be more useful than the other two (malic and citric acids) in assisting h/peracidity.

DAIRY ACIDS

Contained in buttermilk, yogurt and other lactic acid foods. Use in establishing healthy bacterial flora in the lower colon. Useful in those patients who become constipated after receiving antibiotics. Antibiotics have the tendency in some patients to kill bacteria in the lower colon resulting in constipation or bowel problems.

NOTE: In most fruits and vegetables the alkaline nutrients ouweigh the acid nutrients. Therefore, on the whole, they are alkaline in their effect. Fr kt acids are oxidized to form Co2, sodium carbonate and or bicarbonate which are excreted by the kidneys as an alkaline.

Fruits such as plums, prunes and cranberries do not follow this rule because of their organic acid content of BENZOIC and QUINIC acids which the body cannot reduce to Co2 and other alkalines. They are eliminated through the kidney in their acid form.

A normal healthy body is well equipped to handle any and all foods regardless of its alkaline acid properties. If the blood butters (bicarbonates, phosphates and proteins) are normal, they will protect the tissues and the blood against dietary acid-alkaline indiscretions.

REFERENCES

P.D.R. People's Desk Reference Volume 11 - Published by Quest For Truth Publications, Inc. 16224 S.W. Bonaire Lake Oswego, Oregon, U.S.A. 97034 by F. Joseph Montagna.

New Life through Nutrition - Published by New Life Publishing Tucson, 1974 by Dr. Sheldon C. Deal, D.C., N.D.

The Problem Solver Nutritionally Speaking - Published by Creative Printers, Inc. Murray, Kentucky 42071 by Richared Broeringmeyer, D.C., N.D.

Balancing Body Chemistry With Nutrition - Published and Distributed by Color Coded Systems 7759 California Avenue Riverside, California 92504

How to Get Well - Published by Health Plus, Publishers P.O. Box 22001 Phoenix, Arizona 85028, by Paavo Airola, Ph.D., N.D.

Merck Manual, Eighth Edition - Published by Merck & Co., Inc. Rahway, N.J., U.S.A. 1950.

Mega-Nutrients for your nerves - Published by Peter H. Wyden 750 Third Avenue, New Yourk, N.Y. 10017 by H.L. Newbold, M.D.

Nutrition In Medical Practice - Published by W.B. Saunders Company, Philadelphia, PA. West Washington Square Zip 19105

Nutritional Data, Third Edition Second, Revised Printing (out of prindt) - Published and distributed by H.J. Heinz Company P.O. Box 57 Pittsburgh Pennsylvania. Has been replaced by Nutritive Value of American Foods In Common Units Agriculture Handbook N. 456 - Published by Agricultural Reseach Service United States Department Of Agriculture, Washington, D.C. Issued November 1975. For sale by Superintendent of Documents, U.S. Government Printing Office $5.15. Washington D. C. 20402 Stock No. 001-000-03184-8 - Catalog No. A 1.76;456 Highly recommended.

Applied Kinesiology - The Advanced Approach Systems D.C., - Publisher, Pueblo 1976

Touch for Health, Pasadena California 91104 - 1194 North Lake Ave.

Comprehensive guide to nutrition 2nd edition Published by Whole Man Publishing Appleton Wis. 54911, 1979 by Dr. Wm. R. Borrmann, N.D., D.C.

PANCREAS, GALL BLADDER AND LIVER PUMP

by

John W. Brimhall, B.A.D.C.

ABSTRACT: We sometimes find it necessary to treat the organs specifically as well as the circuits that control them. Re-occuring vertebral subluxations and muscle weaknesses can occur due to organ congestion, hypo or hyper function.

For many years we have used a technique, we call the "milking the glands". It is actually a stimulation on the pancreatic, gall and common ducts. We first go to the area on the right abdomen just below the ribs where we break adhesions if we find any by a specific technique we will demonstrate. It consists of taking the tissue slack out with one hand while we have our fingers in an arch fashion approximately one inch away from where the tissue is held and you do a quick, snapping, torqing motion with the entire hand. The finger tips are actually touching, not the flat part of the fingers. Adhesions have an origin and insertion. You hold the tissue at the origin and do the snapping, torquing thrust at the insertion. You then do a seperation in a longitudal fashion in the right mesogastrium where the common duct empties into the intestions. You do this technique simular to the way you would do a golgi body. That is put your thumbs or fingers together over the duct and pull them apart. You then go over to the left anterlateral thorax just under the rib cage and use a lotion or a light cream, (such as abolene cream) and milk from the left rib cage towards

the right on the very inferior portion. Sometimes you will hear a squirting sound as you do this fairly rapidly and firm. You then milk from the right superior aspect of the rib cage down about six inches causing the back pressure to be relieved at the gall bladder and cystic duct as you come down over the common duct.

The next part of this treatment consists of having the patient still supine and the doctor standing on the left side of the patient. You then reach your finger tips underneath the lateral posterior border of the rib cage and your hand and arm lays across the lateral and then up anterior over the chest wall on the right. You do milking motion starting at the finger tips coming up over the palm of your hand and onto the arm on the rib cage just below the nipple line. This in effect causes a stimulation of the liver and a milking action of duct network.

After this is accomplished you again repeat the milking action over the pancreas and thoracic duct to make sure it dosen't build up too much pressure.

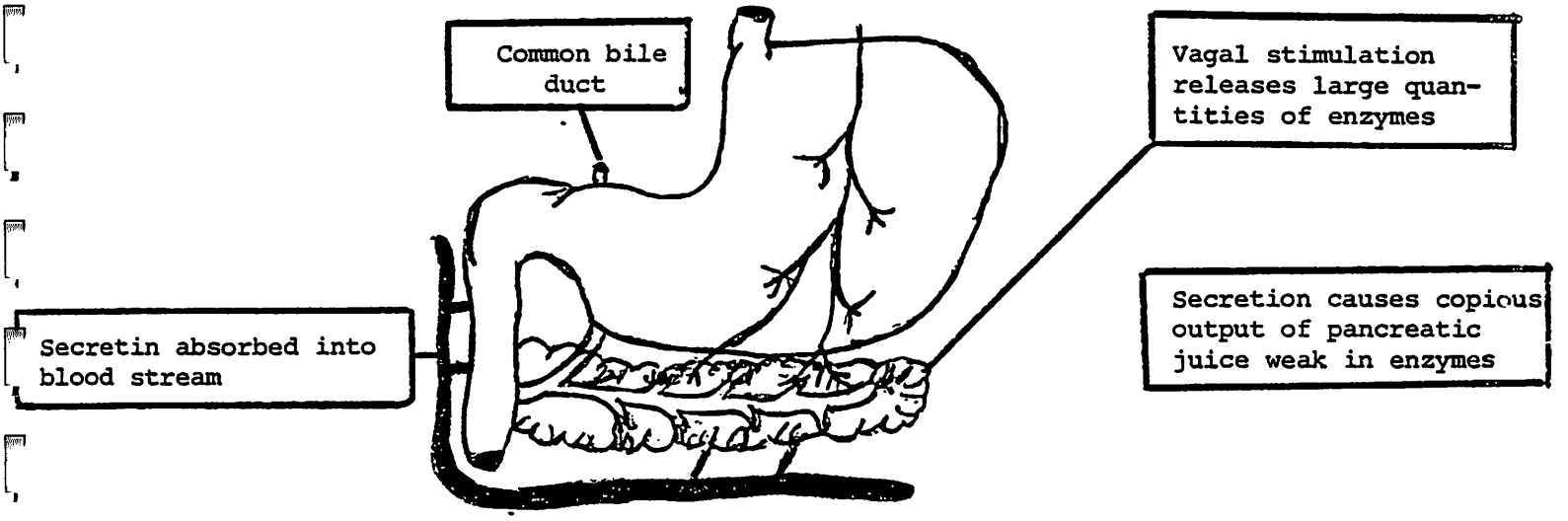
This has been an extremely useful technique in facilitating better pancreas, gall bladder and liver function. As previously alluded to it has also been beneficial to prevent re-occuring muscle weaknesses. The symptoms that can be relieved by these techniques are to innumerable to list but are inclusive to any liver, gall bladder or pancreas symptoms. We have had even severe pancreatitis cases show marked improvement in just a few days. These techniques have been utilized with cystic fibrotic patients to fantastic success as well as in hepititis cases. Needless to say, we support these patients nutritionally where indicated and with the nutritional substances that are indicated by kinesiological, other objective and subjective findings

In this technique and others like it, you are causing mechanical pumping, lymphatic flushing, energy balancing and direct neurological stimulation.

Gytons physilogy states vagal stimulation releases large quanities of enzymes.

REFERENCES: 1. The New Era Chiropractor, R. M. Failor, D.C., N.D.

2. Textbook of Medical Physiology, Arthur C. Guyton, M. D.



RIB TECHNIQUE

by

John W. Brimhall, B.A.,D.C.

ABSTRACT: Persistant rib subluxations can cause multiple problems, e.g. re-occuring vertebral subluxations and fixations, lymphatic statis, intercostal neuritis, etc. We will discuss a technique we use that helps facilitate the other applied kinesiological techniques used and taught in the past. It can almost be considered a soft tissue technique as well as re-alignment of hard tissue.

About eight years ago I was riding a motorcycle cross-country at an estimated speed of approximately 55mph. Rain had eroded two deep ruts about ten foot apart from each other. I hit the first rut which through most of my weight on the front of the motorcycle and then the second rut impact through my chest first into the handle bars of the bike stopping the bike almost instantly and flipping me over onto the ground after the impact of the ribs and metal.

This was my first real look at the rib pain and problem from a patients point of view. I had treated many patients with rib subluxations by standard chiropractic and Applied Kinesiology methods up to this point. But as you can imagine, there is no way that I could have anybody put any force into my rib cage after this incident. It hurt to breath or move into any direction; it hurt severely to even think of adjusting anyone else.

I called a reflex therapist friend of mine from Mesa, Arizona, named Lynn Johnston. As therapist can't adjust as we do he had learned and developed many techniques for working on the soft tissues to help restore normal function.

This is my introduction to what became known as the rib technique. After just one treatment of this rib seperation as he called it, I could go back to work. Because the cartilage had been torn so badly at least a half dozen follow-up treatments were necessary. We have been using this rib technique for years and have had excellent results on a variety of different problems.

This technique which will be explained in detail a little later in the paper was found to not only re-align the ribs but to help keep vertebral subluxations from returning after corrected. It was found that it drained the lymphatics in the rib cage area and stimulated the neuro-lymphatic points. It was found to help balance the acupuncture meridian as well. A persistant shoulder case, bursitis, intercostal neuritis or neuralgia and chronic fatigue respond very beneficially.

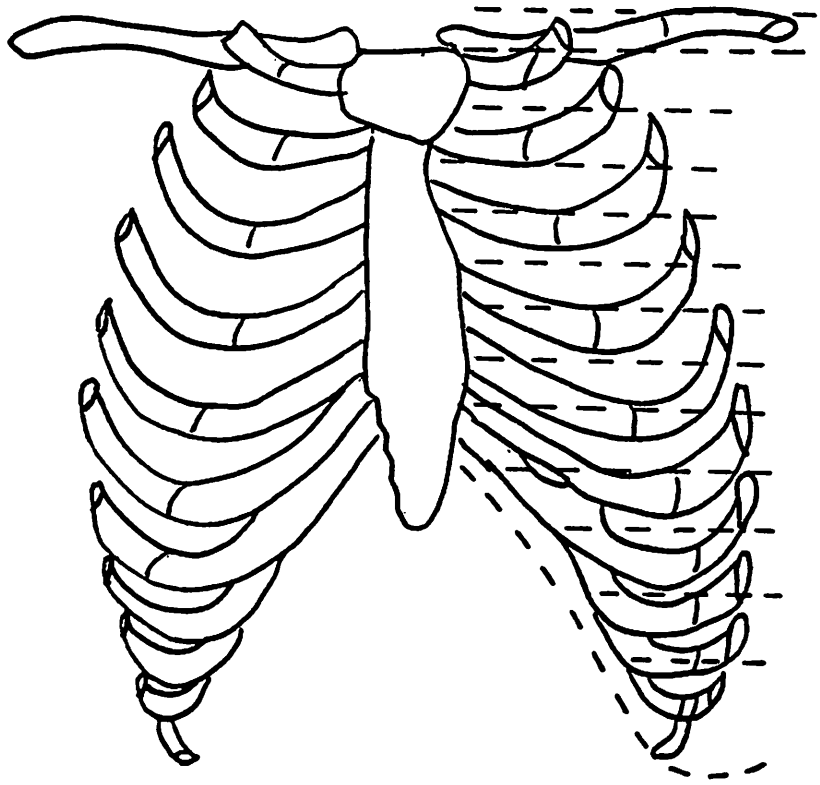
We found that our cystic fibrotic patients respond to this technique with increased energy, decreased coughing, a lack of need of persistant percussion techniques, etc. This technique along with applied kinesiology, pulse diathermy and specific nutritional changes has afforded some cystic fibrotic patients a completely normal life. This will be the topic for another paper in the future with our findings on specific mineral abnormalties as well as soft tissue manipulative techniques.

The rib technique is accomplished by the patient laying supine. One hand is under the patients back at the level of the 12th, 11th, 10th rib and the other hand at the zyphoid process. The inferior hand pulls with pressure exerted against the rib cage with alot more pressure than you can exert against the eye ball. Your finger tips are actually going right between the pairs of ribs in the begining but will continue to go laterally as if you were going pretty much in a horizontal pull rather than going exactly the way the ribs go. The top hand in the first few applications goes from the zyphoid process over the whole anterior lateral border of the rib cage. From then on it goes exactly medial to lateral in a straight line the same as the inferior hand on the back. It is important that the finger tips be going intercostal to cause this neurological stimulation of re-alignment as well as lymphatic flushing. Rib subluxations will literally disapate as these hands come together across the rib cage. This simutaneous movement of the hands from the centrum of the spine and the sterum is the whole of the technique and affords the correction. On the anterior rib cage, breast tissue of females is not a problem as you slide right over the muscular and breast tissue continuing to hold the firm pressure.

We use Abolene Cream which is a slick cleanser which allows you to slip over the skin and muscules without friction. Any type of lotion could be utilized as well. The technique will definitely build new muscles in your fingers. Another point that we should mention, is that we have the ladies arm slipped out of her gown and a towel draped over her which allows us to reach under the towel to accomplish the

technique on the anterior at the same time we are accomplishing it with the other hand on the posterior. The only twist to the technique is that you keep coming pereendicular to the spine and sternum and do not follow the exact rib pattern.

REFERENCES: 1. Human Anatomy Atlas, by Ronald Keller



SPECIFIC POINTS FOR VITAMIN B12 DEFICIENCY

by

SALVATORE V. CORDARO D.C.

ABSTRACT: Vitamin B12, a water soluble vitamin, is unique in that it has a cobalt sustaining substance essential for longevity and is a vitamin that contains essential minerals. It cannot be made synthetically but must be grown in bacteria or molds like penicillin. Animal source is the only source in which B12 occurs naturally in substantial amounts. Vitamin B12 is essential for fat, carbohydrate and protein metabolism. It functions closely with four amino acids, pantothenic acid and vitamin C and helps in iron and folic acid functions.

BACKGROUND: Vitamin B12 is poorly absorbed by the gastrointestinal tract unless the intrinsic factor, a mucoprotein enzyme, is present. Helpful in the oral absorption of B12 is an abundance of calcium, hydrochloric acid and good function of the thyroid gland. The highest concentrations of B12 are found in the liver, kidney, heart, pancreas, testes, brain, blood and bone marrow. Many people lack the ability to absorb B12. Absorbtion appears to decrease with age, plus deficiencies of iron, calcium, B6 and hydrochloric acid. Special note, those who use laxatives regularly deplete the storage of B12. Deficiency begins with changes in the nervous system, soreness and weakness in the legs, diminished reflex, poor sensory perception, walking difficulty, stammering speech and limb jerk. Lack of B12 has also caused a type of brain damage resembling schizophrenia with the following symptoms: sore mouth, numbness, shooting pains, pins and needles, hot and cold sensation. B12 deficiency can also produce psychotic symptoms, mental slowness, mood changes and memory defects. Occassionaly these mental disturbances may be the first sign of B12 deficiency.[2]

Symptoms may take five to six years to appear.[1] Therefore, if not caught early, B12 deficiency may cause permanent mental deterioration and paralysis.

DEVELOPMENT OF TEST: I have observed these symptoms with our patients and have not been able to correlate with a laboratory blood test, and many times the tongue test alone for B Complex made therapy with these references an incongruous task. Yet symptoms strongly suggested a need for B12. As with other laboratory tests that show negative results yet the condition exists, for example, Dr. Broda Barnes in "Hypothyroidism: The Unsuspected Illness", I thought the blood test not an accurate indicator. So I started B12 therapy anyway using RNA for backup, as you well know for cell memory. We instituted treatment slowly to see reactions and lo and behold many changes were noted. For those whose digestion showed difficulty in absorbing B12 we obtained the help of medical friends to use injectibles with good results. We then needed to hang our hat on a good indicator. As you know B12 is important for blood and nerves. We tried blood locations, neurovascular points and associated other points. As you recall this is how the B6 point came into development.[7] But various places were tried for B12 to no avail. Nerve locations and tongue point were tried next and some patients showed a positive TL but not everyone. We then tried the housing of the brain, spinal cord and homuncular proprioceptors. The cranial bones and proprioceptors showed no particular affinity for B12. However, the spinal column and tongue showed a taste for B12. B12 was the only vitamin that nullified the indicator. We then used all clinic patients to try these points on with B12 correcting all of those who showed positive, double

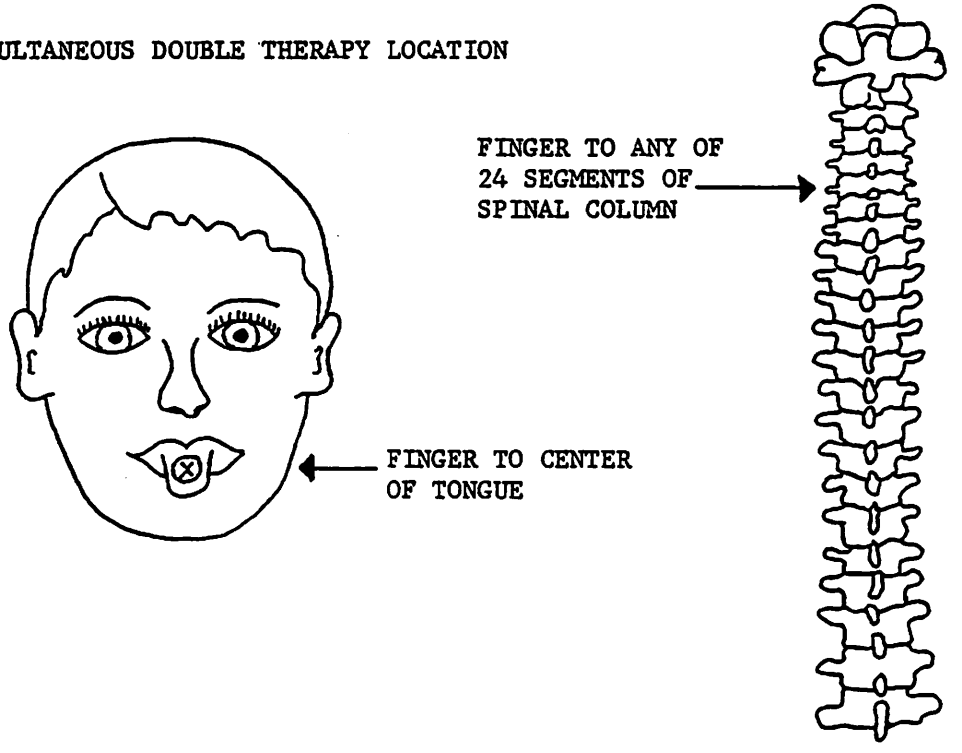
therapy localization to the tongue and any part of the 24 segments of the spinal column. Of course, remember to clear out all spinal segment distortions before doing the double TL.

The list of conditions in which B12 may be of consequence in improving is far too long to list here, but some outstanding ones will be mentioned which research has shown B12 to be beneficial:

1. cancer of the nervous system in children[3]
2. osteoarthritis
3. osteoporosis[4]
4. mental confusion[5]
5. bursitis[6]

In your therapy you should recall the use of calcium, amino acids, pantothenic acid, vitamin C, hydrochloric acid and thyroid for correction.

SIMULTANEOUS DOUBLE THERAPY LOCATION



REFERENCES:

1. Krause and Hunscher, Food, Nutrition and Diet Therapy, p. 141

2. The British Medical Journal (March 26, 1966)

3. Archives of Disease in Childhood, December, 1963, as reported in Cancer, March 28, 1964

4. Medical Press, March 12, 1952

5. Dr. Grabner, "Munchener Medizenische Wochenschrift," Munich Medical Weekly, October 31, 1958

6. Dr. I.S. Klemes, Industrial Medicine and Surgery, June 1957

7. Dr. Cordaro, Specific Points For Vitamin B2 and Vitamin B6 Deficiency, Collected Papers of The Members of The I.C.A.K., Winter, 1981

" The Fourth Lumbar as an Associated Vertebra
for the Sex Meridian of Acupuncture. "

By Dr. Elmer J. Cousineau, D.C.

Abstract:

The adjustment of the Fourth Lumbar Vertebra as an Associated Vertebra for Ovarian-Testicular portion of the Sex-Circulation Meridian.

Introduction:

Since 1978 I have researched the idea that adjusting the spinal vertebra known as the Associated Vertebra of an Acupuncture Meridian would balance all the muscles of that meridian if it had been found to be unbalanced (1).

In the experience of this investigator, it has not always been possible to strengthen every muscle on the Sex-Circulation Meridian by adjusting its Associated Vertebra, the Fifth Thoracic.

The gluteus maximus and the adductors have not always responded to this adjustment. The gluteus medius and the piriformis always do respond like magic and corrects many a Catagory II simply by balancing these two muscles when they are weak

Discussion:

Since the gluteus medius and the piriformis were supposed to be associated with the uterus and seminal vesicles, it was felt there might be another vertebra that would strengthen the gluteus maximus and the adductors, that were assoc-

iated with the ovarian-testicular portion of the sex function. On checking for a vertebra that could satisfy this requirement, it was noted on the charts for the Associated Vertebrae in both Dr. Walther's (2) and in Dr. Stoner's (3) manuals on Applied Kinesiology that the ninth thoracic and the fourth lumbar vertebrae were the only unassigned segments.

Since the ninth thoracic was under consideration at that time for the pancreas portion of the Spleen-Pancreas Meridian, the fourth lumbar was tested to see if it would indeed strengthen the gluteus maximus and the adductors.

It was challenged and found to be involved whenever these two muscles were weak, and its adjustment strengthened them immediately.

These two muscles were always weak whenever the Derifield Negative Leg Check was present in which the long leg on checking leg length does notchange or disappear when the knees of the prone patient are bent and the legs checked again when vertical to the table instead of laying extended. Turning the head had no effect upon this leg length. But adjusting the fourth lumbar balanced the leg length immediately so easily.

Other Results:

The muscles associated with the Circulation portion of the Sex-Circulation Meridian, were listed as the sartorius-gracilis, and the gastrocnemius-soleus, and had to do with the adrenal glands.(4). Dr. John Thies has them listed under the

Triple Warmer Meridian, with the teres minor and infraspinatus muscles associated with the thyroid gland in his book "Touch for Health " in both the 1st and 2nd Editions.(4) Both the thyroid and the adrenal glands are associated with ongoing effort and patient motivation, it seems right that they be grouped together. Adjustment of Lumbar Two, their Associated Vertebra strengthens all of these muscles and eliminates the Circulation portion from the Sex-Circulation Meridian.

This leaves gluteus medius and piriformis only as remaining on Sex Meridian to be strengthened by adjusting the fifth thoracic segment, and this it does so nicely.

Conclusions:

The adjustment of Lumbar Four Vertebra as the Associated Vertebra for the Ovarian-Testicular portion of the Sex Meridian leaves Thoracic Five as the Associated Vertebra for the Uterus-Seminal Vesicles portion of this meridian, and does strengthen the adductors and the gluteus maximus, which Fifth Thoracic does not seem to always help.

Bibliography:

1. Dr. E.J.Cousineau, D.C."Chiropractic Meridian Adjusting" page 55, Collected Papers of ICAK, Summer 1982.

2. Dr. David S. Walther, D.C. "Applied Kinesiology" page 185 1976 Systems D.C., 275 W. Abriendo, Pueble,Colo 81004

3. Dr. Fred Stoner, D.C. "The Eclectic Approach to Chiropractic" 1975, FLS Publishing Co, P.O.Box 15208, Las Vegas, Nevada 89109. page 87.

4. Dr. John Thies, D.C. "Touch for Health" page 31, 2nd Edition, 1174 North Lake Ave., Pasadena, CA 91104.

" The Ninth Thoracic Vertebra and the Pancreas Meridian "

By Dr. Elmer J. Cousineau, D.C.

Abstract: The relationship of the Ninth Thoracic Vertebra as the Associated Vertebra for the Spleen-Pancreas Meridian and the muscle test for its unbalance.

Introduction:

Since 1978 I have researched the idea that adjusting the spinal vertebrae known as the Associated Vertebra of the Acupuncture Meridians would balance all the muscles on those meridians that were found to be unbalanced. (4)

Unbalanced meridians were found by challenging their Alarm Points, their Pulse Points, and then every muscle on their meridian.

Then only the Associated Vertebra was adjusted, and all muscles on that meridian were again checked, as were the Pulse Points and the Alarm Points.

A single adjustment of the Associated Vertebra of the involved meridian would immediately strengthen all muscles on that meridian, and the Alarm and Pulse Points would now check clear. (1)

The Problem:

Some meridians were supposed to have two organs associated with that meridian; as was Sex-Circulation , and also the Spleen-Pancreas Meridians.

The Problem (Contd.)

The idea that there might be another Associated Vertebra for each portion of the dual meridians was prompted by an incident that occurred in my office with a diabetic patient.

The patient had his spine checked for all Associated Vertebrae of Acupuncture Meridians that had shown involvement upon testing his Alarm or Pulse Points, and all previously weak muscles were now strong. It was felt that all systems were now "Go" and he was free to go home. On arising from the adjusting table he asked "What about my diabetes ?"

On checking the patient's original list of complaints diabetes was found among them. On this particular visit, he was also complaining of an inability to elevate his right leg from the table while supine, even against only gravity.

It was then that I remembered the test by Dr. Victor Frank (2) confirmed by Dr. Wallace Gunn (3) which would confirm hypo- or hyper- glycemia without benefit of lab tests. The test involved raising or elevating the right leg for hyper- and the left leg for hypo- while the opposite leg was flexed at the knee with the foot resting upon the table. Failure to elevate against downward pressure was considered positive.

The Spleen Meridian Alarm Point (Sp 21) was checked and found to be clear. Both lower trapezius muscles when checked individually were strong, but when tested simultaneously together, went weak, indicating a thoracolumbar fixation.

The Ninth Thoracic ..... by Dr. E.J.Cousineau (Contd) p. 3

The Solution:

Upon challenging Thoracic Twelve as the Associated Vertebra for Spleen Meridian, it checked clear.

The thought then occurred that there might be another vertebra that would handle the Pancreas portion of the Spleen-Pancreas Meridian, besides the Twelfth Thoracic for Spleen.

The Ninth Thoracic and the Fourth Lumbar were the only unassigned spinal vertebrae as Associated Meridians, and so the Ninth Thoracic was challenged and found to be weak, and the Fourth Lumbar was not. (4)

Upon adjusting the Ninth Thoracic in the direction that produced weakness in a previously strong muscle on testing, it was found that all previous tests became negative and the patient was now able to elevate his right leg even against downward pressure on the leg towards the table.

Most surprising of all was the great increase in the strength of the bilateral lower trapezius muscles when tested simulataneously for the thoracolumbar fixation.

Needless to say, the patient was quite vocal in his surprise at the almost instant recovery of the use of his right leg, both in being able to elevate it, but to be able to walk now without difficulty. He had been off work two weeks, on pain killers and muscle relaxants without any help. The patient went on to a complete recovery of his leg problem but did not continue for the diabetes.

Conclusion:

The use of the Ninth Thoracic Vertebra as the Associated Vertebra for the Pancreas portion of the Spleen-Pancreas-Meridian as added immensely to our ability to handle patients with sugar-handling problems. The use of the muscle test of Dr. Victor Frank is a quick screening test for this disability. Both the latissimus dorsi and the triceps should be checked to confirm the pancreas disfunction. (4)

Bibliography:

1. Dr. E.J.Cousineau, D.C., Office Records, 1978-1982. 312 East Pioneer Avenue, Puyallup, Washington 98371.

2. Dr. Victor Frank, D.C., Collected Papers of ICAK, p.155 June 1977.

3. Dr. Wallace Gunn, D.C. "A Muscle Test for Diagnosing Hypoglycemia " page 63, Collected Papers of ICAK Winter 1979

4. Dr. E.J.Cousineau, D.C. "Chiropractic Meridian Adjusting" page 55, Collected Papers of ICAK, Summer 1982.

SPINAL TORQUE STRESS PATTERNS AND CORRECTIONS

GERALD DEUTSCH D. C.

ABSTRACT: From time to time spinal stress and movement subluxations(1) cause intrinsic subluxation fixation patterns. They can only be corrected in the stress or torque pattern that elicits the problem. I will descibe another approach to detect and correct these hidden distortion and subluxations. You will also witness another method to find some of the hidden subluxations that we so often miss.

After we "clear" the patient of his fixations, subluxations and change his nutrition why do many retrogress if periodic care is not administered? Could it mean that we missed a hidden subluxation? Is it the wrong nutritive support? Is it enough stimulation to the neuro-lymphatics or another organ reflex? Is this the persistant subluxation that Goodheart speaks about?

Illi in his book "The vertebral column"(2) discusses the torque that occurs in the vertebral column during motion. When bending, he states, the vertebral column does not flex or extend symetrically or in a straight line. Rather each segment must and does torque into a curved pattern to accomodate motion.

Gillet of Belgium utilizes motion palpation to determine the motion limitation of the vertebral relationship. The limitation of motion to him indicates the subluxation pattern to correct.

In the paper I previously wrote "Movement Subluxations", I rotated the cervicals to elicit weakness upon motion. The motion then discovered may be challenged (in motion) and only the vertebrae that is involved will maintain the motion challenge weakness. That vertebra is then adjusted into correction but with the cervicals into

the previous motion. One hand therapy localizing will elicit a muscle weakness when cervicals are in motion as opposed to bilateral therapy localizing(TL) a fixation. Thus a fixation and a movement subluxation are differentiated by the single hand TL. The TL disappears after the proper correction. In the prior paper I advocate the correction with motion. After some time utilizing this procedure I now utilize counter resistance as an additional aid to the correction. For example if any tested subluxation is on the left cervical rotation, when the direction of drive is determined the patient is instructed to push away from the adjusting hand onto the opposite or supporting hand. The adjustment is then initiated. The opposing muscles are facilitated and the side being adjusted is inactive, the adjustment then is much more dynamic because the adjustment motion is toward the hypertonic side.

Other spinal segments could be tested in motion either in the sitting, lying or prone position. Any of these areas could elicit weakness upon motion. The doctor then challenges for direction, weakness will only be elicited upon motion and challenge of the specific vertebrae. Only the correct challenge will maintain the weakness upon motion. Challenging the wrong vertebrae will temporarily cause an immediate strengthening of the previously tested weak muscle. This will serve to indicate that this is not the vertebra to adjust because of the rule to adjust the vertebrae into weakness.

Further observation of this motion phenomena brought me back to some basic ideas. For example the prone head turning test indicating an atlas subluxation. The prone to supine short leg check reverses the leg shortening to the opposite side, indicating the occipital lesion.

After correcting atlas and occiputs hundreds of times over, I still noticed minor leg shortening when rotating head. Rechecking all factors of subluxations, fixations, and cranial faults and even with correcting them I still noticed this leg shortening phenemenon. This reminded me of the motion subluxation concept and the torque of cervical motion in relation to the rest of the body. I then challenged the lumbar spine of many patients that I felt to be thoroughly adjusted, with the added factor of cervical rotation. The results were astounding, it was if I never adjusted the area at all. It was as if the the area detorqued the challenged area and reinstituted the challenge. Head turned opposite and neutral of that particular rotation did nothing to elicit a challenge. Head turning and TL caused an immediate weakening of a tested muscle, in these cases a hamstring muscle. Head turning and multiple challenging of the entire spine proved to be very enlightening as there were multiple areas that now challenged that did not before. There is no rule whether the head turns toward the long leg side or the short leg side, although I find that most of the time the challenge will take place facing the short leg side. Many times it may be necessary to check the spine with head facing in both directions. Interestingly, I found many occipital side slips that were overlooked because the extruded tongue challenge did not elicit a muscle weakening. Turning head right and left, tongue extruded enhanced the challenge greatly, and helped turn up the "49-%er".

With the concept of torque, I wondered if the Neuro-Lymphatic(NL) reflexes would show up too. Sure enough they did, but I fear that I did not give them enough NL stimulation to correct them in the first place. Possibly this is just another way to find a hidden reflex? I then thought it was "Eyes Into Distortion"(EID)(3). Soon enough I noticed that many times the head was turned away from distortion and TL was

on the opposite side. After I fixed many Ileo Cecal valves(ICV), TL-ing and turning the head brought the TL back indicating I did not fix the ICV adequately. Since it reappears with head turning, I fix it with the head turned toward the side that recreates the weakness. EID was negative certainly indicating that there is something else happening. Therefore I had something, certainly not EID.

If these torque patterns exist in the supine and prone position, it was a sure bet they would be present in the standing position. Standing analysis shows various conditions such as: high ilium with low shoulder, high ilium with high shoulder and so on. These distortions should be taken care of on an individual basis using the appropriate techniques. Testing a convenient muscle such as the mid deltoid showed an immediate weakness when the head was turned toward the vulnerable side. Sitting sometimes caused a weakening of the tested muscle. Sometimes I noticed the random activity of the weakening of the tested muscle, standing and sitting, standing only, sitting only. I tried adjusting certain vertebrae I thought were involved with this deficiency in the standing position, to no avail. I then figured that changing pelvic alignment would alter the Micro-Torque pattern. Placing different size lifts under shoe or foot at this time in an individual that is standing, or when sitting, ischial lifting would immediately solve this weakening pattern. The lifts of optimal height were found by trial and error, while testing the muscle with head in extreme rotation toward the vulnerable side. The lifts are placed in shoes with instructions to move them from shoe to shoe and wear them at all times. If ischial lifting is necessary they are instructing to utilize ischial lifting procedures either utilizing the lifts in their clothing or carrying a magazine with them for that purpose. Lift usuage should be checked frequently to determine whether they are necessary as a permanent correction or temporary. It has been my experience that with some people

that are being corrected the lift size has to be recalculated either raised, reduced, or sometimes eliminated after a few weeks.

Walking also is another prospect for checking these torque patterns. In addition to the prior considerations one must not forget walking as one of our basic distortion producers. Although many factors can cause problems I am trying to persist with the Micro-Torque idea. Dr. Goodheart recently wrote about the "Walking Gait"(4) in which he speaks of a lack of facilitation of certain muscles in walking. In an attempt to follow through with the idea of walking distortions and abnormal Micro-Torque, I check the walking subluxations in the walking gait position. This is done by assuming the proper gait position, then have patient turn head right and left, but testing a muscle that should not be concerned with the "Walking Gait" as written by Goodheart. Individual vertebrae should be tested in the walking position for challenging. If found should be adjusted in the position found. It is quite difficult adjusting a vertebra in the standing position. When these are found we utilize an "Activator" tool developed by Dr. Fuhr of Redwood Falls, Iowa. The only difference is that I had an extra heavy spring placed into it so as to cause an extra amount of inertia to effect a heavier force into the adjusted vertebra. The changes that occur in the walking position are sometimes very dramatic and should not be overlooked, especially in the more difficult case.

Conclusion: Spinal stress patterns with their abberent micro torque faults can be controlled and corrected in many ways. My findings indicate one of the many means of balancing the body mechanics, utilizing simple methods we have been utilizing in our practice right along.

* * * * * *

April 15, 1982

BIBLIOGRAPHY

1. DEUTSCH, GERALD--MOVEMENT SUBLUXATIONS; 1980 COLLECTED PAPERS OF THE ICAK. PRIVATELY PUBLISHED, DETROIT, MI.
2. ILLI --THE VERTEBRAL COLUMN; 1957 PRIVATELY PUBLISHED. GENEVA, SWITZERLAND
3. GOODHEART, G. J.--EID; 1981 WORKSHOP MANUAL. PRIVATELY PUBLISHED, DETROIT, MI.
4. GOODHEART, G.J.--WALKING GAIT; 1982 WORKSHOP MANUAL. PRIVATELY PUBLISHED, DETROIT, MI.

A CONVENIENT SITTING CHALLENGE FOR A.S. ILLIUM

by

Fred J. Dieterle D.C.

ABSTRACT:

It is a well known fact that an anterior illium malposition is often aggravated by the sitting position and ischial wedges have been used therapeutically in the past by patients in the sitting position. This condition is aggravated by several factors, mostly mechanical, as they relate to the weight-bearing on the ischiums proper. We have devised a simple test that renders accurate and expedient diagnostic results.

FINDINGS:

It has been our consistant observation in clinical practice that certain faults are more easily found in the sitting position than in the supine, prone, or even standing position. As you well know, these problems may have arisen as a result of an injury in this position. Precisely, as a large amount of time is spent sitting. These injuries are consistently the case history of pain in the low back, while driving in an automobile or sitting for prolonged periods of time. Other pelvic faults such as category ones', twos', and threes', as well as fixations, ileocecal valve challenges, and therapy localizations fall into this category.

body's energy, as well as, reduce them. The formula we use is ten drops morning, ten drops noon, ten drops evening of Super Asorb, which is an emulsified vitamin A (Professional Products, Seroyal Brands). This appears to be absorbed through the lacteals opposed to the vilia and goes directly into the lymphatic system, ie: to the cells, bypassing the portal system in part, and perhaps delivers ability to properly process and make available to the cells the vitamin A. Vitamin C in dosages of about 6,000 milligrams apparently alters the PH, assists the hilauronic component of the cellular ground substances, which aides in limiting the spread of the offending agent. Zinc, of course, increased the production of white blood cells rapidly. We feel that the offending organisms are involved in an oxidative process that perhaps chellates copper out of the cells and aides in the oxidation of offending organisms, as per Dr. Paul Eck's research at Ortho-Molecular Labs in Phoenix, Arizona. We have used Thymus tissue, but unless there has been a lead time, apparantly most of the time it is too little, too late. The greatest single factor is the use of Thyroid tissue, particularly the Seroyal Brand freeze dried, enzimatically active substance which <u>evokes an immediate response and increase in the metabollic rate</u>. This is perhaps the most important single key factor in reducing the response time of the body and aiding in a speedy recovery. I am sure there are other more complete explanations and in greater depth than we have represented

in this paper at this time, but these are our clinical observations and they seem to be rather consistant. We have a tremendous number of patients turning to us and saying that their recovery time has been cut in half from the usual.

CONCLUSION:

The use of Bee Pollen to increase interferon, the use of several herbs, as well as, Thymus tissue, we have observed do not have a rapid enough response time. The use of the emulsified vitamin A in the dosage described ten/ten/ten, represents approximately 300,000 units i.u. a day during the course of infection. The body's utilization rate of this vitamin during an active infection is so great particularly regarding epitheleal tissue, that the tissue stores would be exhausted in two to three days if it were not supplemented in approximately these amounts. Zinc is particularly useful, and the thyroid tissue is introducing a new dimension into this process of excellerating the immune system. We also find that the intake of calcium when there is an accompanying fever will greatly reduce the inflammatory process and slow it down with a resultant effect of lowering the temperature by one or two degrees. Calcium Lactate or Calcium Chelate usually sufficed under these conditions.

REFERENCES:

1. Goodheart, George J., Jr. D.C. APPLIED KINESIOLOGY
1982 Workshop Procedure Manual 18th Edition

2. Walther, David S. D.C. APPLIED KINESIOLOGY
Volume I Basic Procedures and Muscle testing. Copy 1981

3. Walther, David S. APPLIED KINESIOLOGY
The Advanced Appraoch in Chiropractic Copy 1976

IMPROVING THE IMMUNOLOGICAL RESPONSE TO THE COMMON COLD IN CLINICAL PRACTICE

by

Fred J. Dieterle D.C.

ABSTRACT:

During the course of clinical practice we have observed a particularly eficacious combination of natural substances that greatly accelerate the bodies response to sore throats, common colds and the ensuing inflammation. Where as there are many purported remedies many of them are paper tigers, they sound good on paper but they simply fall flat on their face in achieving consistant and significant physiological changes and results. The information presented here is not merely anecdotal but has been observed to be of significant value in a significant number of patients ie: in excess of fifty.

FINDINGS:

There is an old axium that goes something like this: feed a cold and starve a fever". There is some truth to the matter as maintaining a higher metabolic rate as well as normal glucose levels at the very first stages of an infection or a cold, appears to be substantially beneficial. Obviously once you have the full blown and inflammatory effect, loading the GI tract simply detracts from the body's other priorities of resolving the existing infection. It seems to divert the

We take a simple Dejarnette sternal roll and insert it under the left and then the right ischium alternately with the patient in a sitting position and test a normal muscle, ie: pectoralis major clavicular. Subsequent to inserting the cushion, I observe the weakening on the side of the anterior ischium. Several other doctors that practice in our office have observed identical results and use this procedure quite regularly. Upon the correction of the A.S. Illium by the usual methods, we observe the resultant improvement in the patient's condition. The cushion usually makes a characteristic hissing sound and you may frequently hear the patient say, "Oh boy, a whoopy cushion". It usually gets a chuckle and yields very satisfactory results.

REFERENCES:

1. Goodheart, George J., Jr. D.C. APPLIED KINESIOLOGY 1982 Workshop Procedure Manual 18th Edition

2. Walther, David S. D.C. APPLIED KINESIOLOGY Volume 1 Basic Procedures and Muscle Testing Copy 1981

3. Walther, David S. D.C. APPLIED KINESIOLOGY The Advanced Approach in Chiropractic Copy 1976

LIMBIC MEMORY TECHNIQUE

BY
Kenneth S. Feder, D. C.

Abstract- This paper discusses the theory of a cortex limbic connection and the use of a facilitating technique to recycle transmission between the limbic and cortical systems.

According to a new, comprehensive theory, all thoughts and memories are coded by subtle feeling- tones that accompany perception. Psychiatrist William Gray of Newton Center, Mass., suggest that thoughts are not purely intellectual but are embedded in emotional codes. Feeling tones, Gray said, serve both to integrate the formation of thoughts and personality structure and to code memory.

Gray compared the joint structuring of emotions and thought to DNA. He has postulated that there is some sort of emotional alphabet which when combined gives an infinite array of possibilities. Just as there is no body building without both strands of the DNA molecule, both halves of a completed emotional/ cognitive structure (ECS) are necessary for adding a thought to the structure of knowledge. Gray described his theory as follows: "I thought that nature would have been extremely wasteful if the rich subtleties of human feelings served only the purpose of momentary motivation of action, otherwise disappearing entirely from the scene.

Systems theorist Paul LaViolette of Portland, Oregon has translated Gray's theory as it conforms to experimental evidence that experience is coded and stored in the brain as neuroelectric waveforms which can later be elicited by the passage of new wave forms of comparable frequency. The brain handles information more like an AM/ FM radio receiver than like an electronic computer Mental events, sensations, perceptions, feelings, emotions are encoded and processed by the brain as if they were AM/ FM neuroelectric waveforms These waveforms (feeling tones) are amplified into

thoughts while they recycle between the limbic (emotive) and cortical (perceptive) system. In a binary computer; however, informational meaning is dependent on which particular wire conducts it. The stream of consciousness, LaViolette said, is a continually circulating collection of feeling tones that enter the circuit through the hypothalamus (present experience) and hippocampus (past experience). As feeling tones incubate within the limbic circuit they also circulate via another loop between the sub-cortex and pre-frontal cortex. Rather than being a top down process knowing is a bottom up process in which events at the microlevel become effects at the macrolevel.

LaViolette's brain mode is based on the cycling of ECS's within the frontal-limbic connections. In this model, associations do not occur primarily in the cerebral region is not to integrate the diverse mental experiences but to separate them, to give them breathing room not possible in the lower brain centers.

APPLIED KINESIOLOGY APPLICATION

After evaluating LaViolette's brain model, I attempted to implement his theory of limbic Cortical integration into a workable A.K. procedure.

Having previously utilized two independent A.K. procedures, the Limbic technique, and hologramic technique, which I felt were the A.K. components of LaViolette's brain model, I decided to combine the procedures to form one technique. (Limbic memory)

After experimenting with different combinations of theory localization to ilicit limbic- cortical weakness (Limbic Memory) the following procedure appears to be the most consistent.

1) Clear Limbic and Hologramic weakness
2) Have patient therapy localize the nose
3) While patient TLs the nose have the patient simultaneously impliment right

or left brain activity (humming or multiplication table)

4) Note phase of activity which produced weakness

Correction- If weakness occurs with TL to nose and simultaneous right or left brain activity

1) Tap side of head that the phase of brain activity caused weakness on, with the phase of brain activity which did not cause the weakness.
2) Simultaneously tap bridge and sides of nose; example, If TL to nose and humming caused weakness then correction would be tapping of nose and right side of head on verbalizing the multiplication table.
3) simultaneous tapping of nose and head seems to coordinate the neuro-electric waveform described in LaViolette's model.

The first patient that this approach was attempted on was a male with multiple sclerosis. He had an anability to flex his left leg and hip more than four inches. His limbic and holographic weaknesses were corrected individually prior to investigation of the limbic memory technique. The patient was then evaluated for limbic memory fault and he was found positive. The correction as above was made and he was able to flex his hip and leg with dramatic improvement. This is only one of numerous anecdote cases that have resulted from utilizing Limbic memory technique. The coordination of Limbic cortical functioning may be of assistance in correcting the disturbances at the microlevel of physiology with consequential effects upon the macrolevel of physiology.

SOURCES

Brain Mind Bulletin- Part 1 Volume 7; No. 6

Man- Environment Systems 9 (1): 3-14, 15-47

THE FUNCTION OF THE GLUTEUS MAXIMUS

Christopher L. Harrison, D.C.
August, 1982

C. Harrison, D.C.
Function of Glut. Max.
P1

ABSTRACT

In this paper, the author shows through personal experience how he found that the gluteus maximus muscle may well have a function additional to the presently known functions. A rather lengthy bibliography and two worldwide computer searches show that this may be an original idea.

C. Harrison, D.C.
Function of Glut. Max.
P2

Often when discoveries are made in our universe, they occur by accident. The following discovery was found quite by accident and yet I feel that it is just as important to our work as if I had been actively researching this area.

Three years ago I purchased and put together the equipment necessary to make a complete weight training gym. One of the pieces of equipment that I installed was a floor-wall mounted pulley that could be used in a variety of positions. In one of the exercises I attached the cable of the pulley near the floor to an ankle strap which fastened securely around my ankle. I then stood, bracing myself with my hands, and pulled the weights using the four ranges of hip motion: flexion, extension, abduction and adduction. I assumed that I was using the ilio-psoas and rectus femoris in hip flexion, the gluteus medius in abduction, the adductors in adduction and gluteus maximus and hamstrings in extension.

Approximately one year after using the equipment in this fashion, I decided to palpate the muscles involved in extension. To my utter surprise I discovered that the gluteus maximus hardly contracted while the hamstrings contracted extensively and performed most of the work of extending the hip joint. I was quite amazed with this finding and thought that possibly it was some sort of error either in my body position or possibly in my anatomy or physiological response. However, upon testing other people, I found the same thing: the hamstrings performed most of the work in hip extension. I also found that the gluteus maximus contracted more forcefully in hyper-extension than in normal extension.

C. Harrison, D.C.
Function of Glut. Max.
P3

At this point I began to consult all of the major texts in anatomy and carefully studied the anatomy and physiology of the gluteus maximus muscle which consistently confirmed the premise that hip extension was its major function. I kept testing the gluteus maximus in different positions on my patients and repeatedly found that the gluteus maximus only performs as a major mover when the knee is hyperflexed. This led me to the conclusion that the gluteus maximus is chiefly used as an extensor only in movements such as sprinting or the early movement of the full squat. However, something told me that there was more to this rather large and interesting muscle than that.

Again, quite by accident, I discovered the mysterious function of the gluteus maximus. One day when I was doing some isometric exercises, I noticed that when I tensed the buttocks in isometric contraction the pelvis moved forward. As I experimented in tensing and squeezing the buttocks together and watching the movement of the pelvic structure, it suddenly dawned on me that one of the major, if not the major function of the gluteus maximus, is the propulsion of the pelvis forward as in human coitus. Armed with this revelation, I began to test and retest the gluteus maximus muscles in all of the different positions and found that by projecting the pelvis forward, the gluteus maximus would contract strongly, and that by squeezing the gluteus maximus tightly, the pelvis would project forward. The only obstacle in my accepting the new function of this muscle was that the major texts neither referred nor even alluded to this function.

C. Harrison, D.C.
Function of Glut. Max.
P4

My next step was to spend hours in the Lane Medical Library at Stanford Medical school looking at all the journals and texts on pelvic mechanics, kinesiology of the pelvis, muscle functions of the human sex act, and on kinesiology in general. Nowhere was it mentioned that the gluteus maximus is the major mover of the pelvis in coitus. I found only two books that alluded to the possibility that the gluteus maximus might propel the pelvis structure forward. One was a book entitled, Kinesiology, Fundamentals of Human Motion, by Katherine Wells. Wells states, "When the thighs are held motionless, the gluteus maximus pulls on the pelvis. If the trunk remains in the erect position and the feet remain in place on the ground, contraction of the gluteus maximus produces interesting results: the pull on the femur produces slight outward rotation at the hip joint. At the same time, the pull at the muscle's origin decreases the inclination of the pelvis." What the author is saying is that the gluteus maximus is thrusting the pubis portion of the pelvis forward thus reducing the sacral angle. The only other book to allude to this was Physiology of Motion, by G.B. Duchenne. Duchenne says, "It is well understood that if the femur is considered as the fixed point, this muscle (gluteus maximus) becomes a powerful extensor of the pelvis; it is even its principal function in certain circumstances.... To sum up, it may be stated that the principal action of the gluteus maximus is powerful extension of the thighs on the pelvis or the pelvis on the thighs, at the moment when they are in flexion to each other, as for instance in mounting stairs or marching upgrade, or jumping, or in similar circumstances."

C. Harrison, D.C.
Function of Glut. Max.
P5

If it is true that the gluteus maximus is the primary mover in pelvic thrusts in coitus, it is difficult to believe that none of the journals and books that I consulted mentions this fact. Therefore I made two computer searches at the Lane Medical Library which incorporated the MEDLARS II unit of the National Library of Medicine National Interactive Retrieval Service. I was told this service would make a search for all U.S. and foreign data that had been translated on the topics I requested. In other words, this would bring me all the data regarding pelvic thrusts and the gluteus maximus that had been published in the last ten years. The computers found nothing published in this field. I requested additional searches with different topic titles and again found nothing.

In summary, I am proposing that the gluteus maximus is the primary mover in pelvic thrusts in human coitus. It is evident after extensive research that little, if any, work has been done in this area. The research necessary to prove this thesis would not have to be extensive; hopefully this will happen in the near future. And it seems clear to me that recognition of this fundamental physiological fact will certainly enhance many research and clinical studies in the future.

BIBLIOGRAPHY

1. Applied Physiological Mechanics; Dhanjoo Ghista; Harwood Publishing; New York; 1979.

2. Basic Biomechanics of the Skeletal System; Victor H. Frankel, Margareta Nordin; Tea and Febiger; 1980.

3. Biomechanics of Human Motion; Williams; Lissner, Sounders Publishing; Philadelphia, Pennsylvania; 1962.

4. Biomechanics of the Locomotor Apparatus; Pauuels; 1980.

5. Biomechanics of the Normal and Diseased Hip; Pauuels; Translated by Furlong and Maquet; Springer-Verlag, Berlin, New York; 1976.

6. Biomechanical Studies of the Musculo-Skeletal System; Evans; Thomas Publishers, Springfield, IL.; 1961.

7. Clinical Kinesiology; Brunnstrom; Davis Company; Philadelphia PA; 1972.

8. Coordination and Regulation of Movements, The; Bernstein; Pergamon Press, Oxford, England; 1967.

9. How Man Moves; Sven Carlsöö; Translated by William P. Michael; Heinemann, London, England; 1972.

10. Human Figure in Motion, The; Muybridge; Dover Publications; NY; 1955.

11. Human Locomotion and Body Form; Morton and Fuller; Williams and Wilkins; Baltimore, MD; 1952.

12. Human Locomotion: Biomechanics of Human Motion; LeVean; Translated by Williams and Lissner; Saunders Publishing; Philadelphia, PA; 1977.

13. Human Machine, The; A.B. Bennett; Doran Company; New York; (Date Unknown).

14. Human Machine, The; Howell, Ng and London; Funk and Wagnallis Co.; 1924.

15. Human Mechanics; Schenck; Davis Publishing; Philadelphia, PA.; 1980.

16. Human Movement Potential; Sweigard; Dodd, Mead and Company, N.Y.; 1974.

17. Introductory Biomechanics; Schenck and Cordova; Davis Publishing; Philadelphia, PA; 1980.

18. Kinesiology; John Cooper and R.B.G. Glassow; Mosby, Lt. Louis, MO.; 1972.

19. Kinesiology and Applied Anatomy: the Science of Human Movement; Rasch and Burke; Tea and Febiger, Philadelphia, PA; 1978.

20. Kinesiology, Fundamentals of Human Motion; Wells; Saunders, Philadelphia, PA.; 1955.

21. Kinesiology of the Human Body Under Normal and Pathological Conditions; Steindler; Thomas, Springfield, IL.; 1955.

22. Muscles Alive; Basmajian; Williams and Wilkins, Baltimore, MD.; 1978.

23. Muscles and Movements; MacConaill and Basmajian; R.E. Krieger, Huntington, NY.; 1977.

24. Musculoskeletal System, The; Poland, Hobart, and Payton; Medical Examination Publishing Company, Inc., Garden City, NY.; 1981.

25. Orthopoedic Biomechanics; Victor Frankel and Arthur Burnstein; Tea and Febiger, Philadelphia, PA.; 1970.

26. Physiology of Exercise; McCurdy; Tea and Febiger, Philadelphia, PA.: 1928. 1st Edition.

27. Physiology of Exercise; Morehouse and Miller; C.V. Mosby Company, St. Louis, MO.; 1976. 7th Edition.

28. Physiology of the Joints, The; Kapandji; Translated by L.H. Honore; Livingston, London, England; 1970-1974.

29. Physiology of the Joints; Volumes II and III; I.A. Kapandji; Translated by L.H. Honore; Churchill, Livingstone, Edinburgh, Scotland; 1970-1974.

30. Physiology of Motion; G.B. Duchenne; Translated by E. Kaplan; N.B. Saunders Company, Philadelphia, PA.; 1959.

31. Posture and Movement; Talbott and Humphrey; Paren Press, NY.; 1979.

32. Understanding the Scientific Bases of Human Movement; Gowitzke and Michner; Williams and Wilkins; Baltimore, MD.; 1980. 2nd Edition.

COMPUTER SEARCH

MEDLARS II: National Library of Medicine, Bethesda, MD.; Muscles Used in the Human Sexual Act; 20209; 1982. Search run twice for more specific data.

WHOLISTIC APPROACH TO WEIGHT REDUCTION, MAINTENANCE AND FITNESS

BY KARL O. HYNES, D.C.

ABSTRACT To offer an alternative wholistic approach to weight reduction, maintenance and fitness.

This paper outlines a program designed to meet the needs of a person seeking a more permanent solution to an obesity problem. The basic idea being that achieving weight reduction without concurrently employing a program for sustaining the weight loss and effecting a high level of physical fitness is all too often a short-lived success, if successful at all. These solutions are no easier than any others one encounters and there are no miracle cures offered. It does put all of the tools in the patient's hands and relieves the doctor of much of the consultation that ordinarily takes place with the chronically obese patient. The chronically obese patient becomes no different or difficult to treat than any other patient, which is a relief to some of us.

PHASE I. "THE TOOLS"

A. Chiropractic and Applied Kinesiological Examination

1. Determination of the patient's present level of health irrespective of the degree of obesity.(Zillion factors of IVF)

   a. If no outstanding structural, chemical or mental imbalances are present, the the patient is candidate to begin "Phase II of direct self treatment.

   b. If the patient is not adequately balanced to begin "Phase II", begin treatment to correct imbalances using Applied Kinesiology-Chiropractic total approach.

2. Specific tests for obesity.

   a. Skinfold test for percentage of total body fat.

      1. New product: Skindex hand held computer (see Jerry Morantz)
      2. Determine the patient's desirable weight and optimal fat levels: Female-22% Male-15%.

   b. Record weight and measurements. Take measurements at the base of the neck, nipple line, 5 inches above elbow, 8 inches above knee, umbilicus, and broadest part of hip.

B. Ultra Balance - Detoxification product and balanced protein food to enhance metabolic breakdown of fats. (See Jerry Bland material for a well written explanation and guidence in the use of these products.)

1. Insures a more healthful fasting weight loss.

C. Implementation of fitness ideas of Covert Bailey in Fit or Fat.

1. Recommend use of a rebounder type of device for all physiological considerations as well as for convenience and privacy. It is also the easiest exercise for the obese.

2. Any desirable aerobic activity must be used daily as outlined in Fit or Fat.

D. Psychological Reprogramming

1. Permanent Weight Loss cassette program by Dr. Clark Cameron (Nightingale/Conant Corporation)

a. The cassettes are a tremendous tool for the patient's continuous self treatment. These are excellent informational tapes utilizing the latest accelerated learning methods to assist the chronically obese in understanding and correcting their problem.

PHASE II. "THE PROGRAM"

A. Have the patient set realistic goals based on 3-4 pounds lost/week and total amount of body fat to be lost.

B. Review the use of all "tools" and their importance to the total success of their program.

C. Monitor the patient on a weekly basis.

1. Applied Kinesiological and Chiropractic evaluation and treatment as needed to prevent the onset of any determental symptoms.
2. Blood Pressure sitting, laying and standing
3. Record the patient's weight and measurements

a. Have the patient agree not to do this on their own.

As was mentioned previously, this program offers nothing unusual or miraculous. It does present some of the latest most useful tools in helping to alleviate what is considered as our most serious health threat, imbalances living, in all its manifestations; obesity being only one.

REFERENCES

1. Fit or Fat by Covert Bailey, Houghton-Mifflin Boston C. 1977

2. Permanent Weight Loss by Dr. Clark Cameron, Nightingale-Conant Corp., 3730 W. Devon Ave. Chicago, Ill. 60659 800-323-5552 1982.

3. Doctor's Manual for the Ultrabalance Weight Management Implementation System. "Health Resources, Inc." 14250 NE 21st Belveue, Washington 98007 206-644-2702.

DANIEL A. KLEIN

WHOSE DESEASE IS IT ANYWAY ?

One of the first things I taught in Chiropractic College was that the students would be studing deseases and symptoms some of which they would have. But this did not mean that I had the desease. (Transference) To go along with this I pointed out that most medical specialists die of their own speciality. I pointed out that in the students practices their patients might drain their energy by the transference and while their patients recovered they might get backache, etc. This phylosophy was pure conjecture with no proof however it seemed to work.

The advent of surrogate testing was further evidence that energy or lack of energy could be demonstrated.

The sequential developement of the doctor acting as the surrogate to determine the health statas of the area under question is well documented (Doctor TL to wrist) (laying on of hands).

While demonstrating to our class Dr. Carmine Esposito related a incident in his office which really brought home to me this question of whose desease is it anyway ?

He stated that he was caring for a woman whose child had a fractured clavicle. The woman was rough with the child pulling the arm on the side of the fractured clavicle. The child cried in pain and the woman said he was just trying to get attention because the child would often play rough with his friends and not complain. Dr. Esposito tested the woman, she was strong in the clear and he asked her to TL the childs clavicle. Not only did the womans muscle weaken but the mother got sharp pain in the clavicle.

Therefore if energy or lack of energy can be transfered and pain can be transfered, we doctors better be on guard so that we do not allow ourselves to take on our patients ills. One kinesiologist can help thousands of people in a life time of chiropractic, one sick chiropractor can't help himself.

OCULAR LOCK/VEVAXIS - AN ASSOCIATION?

by George N. Koffeman, D.C.

During three days in November, 1981, patients were tested in three catagories: (1) Ocular lock - standing, (2) Ocular lock - supine, (3) Vevaxis. Children and those above age 75 were excluded, otherwise patients were tested in appointment order. Seventy-four patients were tested in that time frame. Results are tabulated.

During the day to day routine of office practice I gradually noticed that finding and correcting O.L. in the standing position did not preclude its presence in the supine position. I would then re-do the reflexes and it would clear. I wondered why this should be. Remembering a conversation with Dr. Moon* in Chicago in June, 1981, I recalled that he had said clearing Vevaxis balanced most meridians, so I surmised that these patients had Vevaxis.

The results were as follows:

	STANDING	SUPINE	VEVAXIS
1.	+	+	+
2.	-	+	+
3.	-	+	+
4.	+	+	+
5.	-	-	-
6.	-	+	+
7.	-	+	-
8.	-	-	-
9.	-	+	-
10.	-	+	+
11.	-	+	+
12.	-	-	-
13.	-	+	-
14.	-	-	-
15.	-	-	-
16.	-	+	-
17.	-	-	-
18.	-	-	-
19.	-	+	-
20.	+	+	-
21.	-	-	-
22.	-	+	-
23.	-	+	-
24.	-	+	-

	STANDING	SUPINE	VEVAXIS
25.	-	+	-
26.	-	-	-
27.	-	+	-
28.	-	+	-
29.	-	+	-
30.	-	+	-
31.	-	+	-
32.	-	-	-
33.	-	+	-
34.	+	-	-
35.	-	+	-
36.	-	+	-
37.	-	-	-
38.	-	+	-
39.	-	+	-
40.	-	-	-
41.	-	-	-
42.	+	-	-
43.	-	+	-
44.	-	+	-
45.	-	+	-
46.	-	+	-
47.	-	-	-
48.	-	-	-
49.	-	+	-
50.	-	-	-
51.	-	+	-
52.	+	+	+
53.	-	-	-
54.	-	-	-
55.	-	-	-
56.	-	+	-
57.	-	+	-
58.	-	+	-
59.	-	+	-
60.	-	-	-
61.	-	+	-
62.	+	+	+
63.	-	+	-
64.	-	-	-
65.	-	+	-
66.	-	+	-
67.	-	+	-
68.	-	+	-
69.	-	-	-
70.	-	+	-
71.	-	+	-
72.	-	+	-
73.	+	+	-
74.	-	+	-

Key: condition present (+)
condition not present (-)

Postulate: Patients found to have O.L. standing and supine when standing correction did not "carry over" to the supine position should be found to have Vevaxis.

Only patients No. 1 - 4 - 52 - 62 met the criterion. All had Vevaxis. No. 52 was corrected by stimulating the centers in the supine position thus altering the outcome by 25%. I feel this was an error on my part and must be taken into account in this report.

Conclusions: I do not believe this sample to be large enough for the percentage found to be very meaningful, i.e., to make a statement regarding the interaction of O.L. and Vevaxis. It may be worth checking when confronted with instability in crossing patterns. I believe that 500 or more patients would have to be checked before statistical reliability could be assured..

There are a number of ways to approach this experiment - (a) correcting Vevaxis to see if it corrects any aspect of crossing, (b) treating supine to check the other factors, etc. This would "burn-up" a lot of patient material and may not be worth the effort but, it does seem to be worth considering.

* - Dr. Ineon Moon - Acupuncturist
ICAK Member, Chicago

George N. Koffeman, D.C.
203 S. West Ave.
Jackson, Michigan 49201

SAGITTAL SUTURE JAMMING AND RECTUS ABDOMINUS WEAKNESS

DAVID W. LEAF, D.C.

Abstract: a correlation has been found between the various divisions of the rectus abdominus and jamming of sections of the sagittal suture.

In reviewing the testing of the rectus abdominus, as developed by Beardall and shown in Walther's new text on Applied Kinesiology, the question of jamming of the sagittal suture came to mind. Theoretically, if the suture was jammed, all of the separate divisions of the muscle should test weak. An experiment was done in which just a portion of the suture was jammed and it was found that only a portion of the rectus abodominus would weaken.

In the clinical setting, I have tested all patients that exhibit isolated weakenss of one segment of the rectus abdominus for jamming of a corresponding area of the sagittal suture. In a large majority of the cases, there exists the jamming of the suture.

The most inferior portions of the rectus abdominus have been found to be related to the most anterior portion of the sagittal suture. As you move back on the suture, you will find jamming affecting the more superior portions of the rectus.

When a jamming is found, only that small segment of the sagittal suture needs to be spread.

This procedure does not replace any other treatment. Stimulation of the other refelexes involved with the rectus must still be used when indicated.

At times, this has helped me to understand the various lack of tone found only in one portion of the rectus.

CARPAL TUNNEL SYNDROME

James R. Lent, D. C.

ABSTRACT:

An additional step to the correction of the Carpal Tunnel Syndrome, and the disclosure of a Capitate subluxation, while employing the same test.

Although the testing and correction of the carpal tunnel syndrome may seem familiar, there are a couple of things I have observed which may enhance the correction.

First, with the hand in supination, have the patient hold the thumb and fifth finger together while you attempt to pull them apart. If there is a fairly uniform weakness of the opponens pollicis, and the opponens digiti minimi, then it would indicate the carpal tunnel syndrome. Therapy localization would verify this.

The correction is as usual, with a quick two handed thrust to approximate the distal ends of the ulna and radius.

Retesting as above will show a return of normal strength of the opponens muscles. However, a sharp dorsiflexion of the wrist will return the original weakness of the muscles.

If, however, following the same corrective procedure as above, the golgi tendon technique is applied to the pronator quadratus muscle, the sharp dorsiflexion of the wrist will not return the weakness, as occurred previously. There is considerably less recurrence of the problem when this technique is employed routinely.

A second thing may be shown with the same testing procedure.

CARPAL TUNNEL SYNDROME: Lent
2.

This time, if the opponens digiti minimi shows the only weakness, then it is usually because of a dorsal subluxation of the capitate, rather than a carpal tunnel syndrome.

As you will recall, the carpal bones are arranged in a somewhat dorsally convex configuration. The dorsal movement of the wedge shaped capitate allows an internal movement of the hamate on which the opponens digiti minimi originates, and thus the resultant weakness. This can be verified by therapy localization over the capitate on the dorsal surfacr of the wrist.

Correction of the capitate dorsal subluxation is performed with the hand pronated. The thumbs are placed next to each other over the elevated capitate and the fingers in the patient's palm. While inducing a slight traction, a sharp downward, and slightly palmar, thrust is given. Perceptable movement is usually felt.

Retesting, as previously, will show a return of normal opponens strength.

TOUCH FOR HEALTH AS A PRACTICE BUILDING PROGRAM

by

DONALD A. McDOWALL, D.C.

ABSTRACT: A study of patient receptivity to the Touch for Health program showed a 5.8% response from an active Applied Kinesiology practice with only 1.2% continuing on to complete the Touch for Health basic course. Patient volume increased during the time of promotion and classes by 11.67% the first four weeks after promotion. It then dropped to an increase of 5.84% four weeks after that. New patient volume decreased 10% the first four weeks after mailing and 15.5% four weeks later.

INTRODUCTION: Touch for Health has been advocated as a first aid program adjunctive to Chiropractic care.[1] We wanted to find out how many of our patients were interested in finding out more about it and if the program could be considered as a practice building tool.

METHOD OF STUDY: A list of all active patients was compiled and recorded. Active patients refers to patients who have received care and wish to stay on our mailing list.
A postcard was designed (fig. 1) and mailed. A date was determined for presentation of a one and one half hour introduction to the Touch for Health program. The program was designed to explain the goals, history, application and demonstration of the program. This program was presented

without cost to encourage as many patients as possible to attend.

The basic Touch for Health program we followed is outlined in the Instructor Training Handbook published by the Touch for Health foundation and covers a teaching period of ten hours.

Friends of patients were also invited to attend and were not excluded from the study.

Records were kept of attendances at the free lecture, Basic Touch for Health program and interest in the Instructor Trainers Workshop and the Advanced Touch for Health program.

Graphs were designed to illustrate trends regarding patient volume and new patient volume. Trends one month before and two months after the postcard mailing were also recorded.

Expenses were recorded to determine the cost of promoting this program.

Our venue seated 60 people and needed to be extended to other times to accomodate everone.

RESULTS:

Attendances:

1.	Number of patients circulated	3170
2.	Number of patients booked	281
3.	Number actually attending lectures	183
4.	Number booked to attend basic program	58
5.	Number actually attending basic program	38
6.	Number interested in advanced course	14
7.	Number interested in doing the Instructor Training Workshop	0

Costs:

1.	Printing and handling	350.00
2.	Postage	760.58
3.	Venue	100.00
4.	Pamphlets and other literature	100.00
	Total =	1310.58

Receipts:

1.	Fees 38 multiplied by $45.00	1710.00

DISCUSSION: A considerable period of time was involved in preparing this program from both the instructor and assistants efforts. We found we needed a week for printing and mailing as well as preparation of all the programs.

We observed a drop in attendances as compared to reservations in the introductory lectures. 183 attended as compared to 281 reservations indicating a drop of 34.9%. Results showed that 58 out of 181 invitations to attend the Touch for Health basic class were accepted. A positive response of 32%. Of these only 38 attended. This reflected 34.5% drop in attendance. Of these 38 individuals 14 wanted to attend an advanced program and none wished to attend the instructor training workshop.

Overall, this reflected positive attendance of 38 individuals to the basic Touch for Health Workshop as the results of a mailing to 3170 patients. This result reflects a 1.2% response. Attendances at introductory lectures were higher. 183 attended from 3170 patients indicating a 5.8% response. The total cost of this program was $1310.58 excluding the instructors time.

The results of a study of patient flow trends from Graph 1 indicates that the four weeks befor mailing a patient volume of 1713 patient visits were recorded. The four weeks following the mailing showed an increase to 1945 visits. An increase of 34.54%. The next four weeks also indicates an increase to 1813 visits. An improvement of 15.84%.
The new patient volume, however, shows a reverse trend. The number of new patient visits before the mailing was 129. Four weeks after,it dropped by 13 patients to 116. A 10% decrease. Four weeks later a 20 patient decrease occurred to 109, a drop of 15.5%. No increase in the new patient volume during this period.

CONCLUSION: From this information the profitability of providing Touch for Health workshops by promotion among existing patients showed a 30.48% return on an investment of $1310.58. This did not include the instructors time or fees. A possible fee schedule of $39.94 per hour for the 10 hour basic program may be considered worthwhile, but it should be remembered that 7½ hours were used in lectures to promote this class resulting in a return of $22.82 per hqur for time invested. For the doctor, I do not believe this return is worth the time invested. More information would be needed to determine the value of assistants teaching and organising this program. A 5.8% response to direct

mailing indicated the amount of patient interest in the Touch for Health program. Unfortunately, only 1.2% followed through to complete the basic course.

As a practice building tool, it seems the existing patient volume did increase after the mailing but may have been more from the contact of the mailing than the attendance at the lectures and basic course. Evidence of this is illustrated from the drop in new patient volume. For practice building purposes we would consider a more positive indication as a rise in new patient volume.

References

1. Thie, John, Touch for Health, California, De Vouss & Co. 1979.

AN INTRODUCTION TO TOUCH FOR HEALTH

Dear Patient,

This is the first in our series of Self Health Lectures for 1982. It will be held at our clinic Tuesday, February 16 from 7.00 to 8.30p.m.

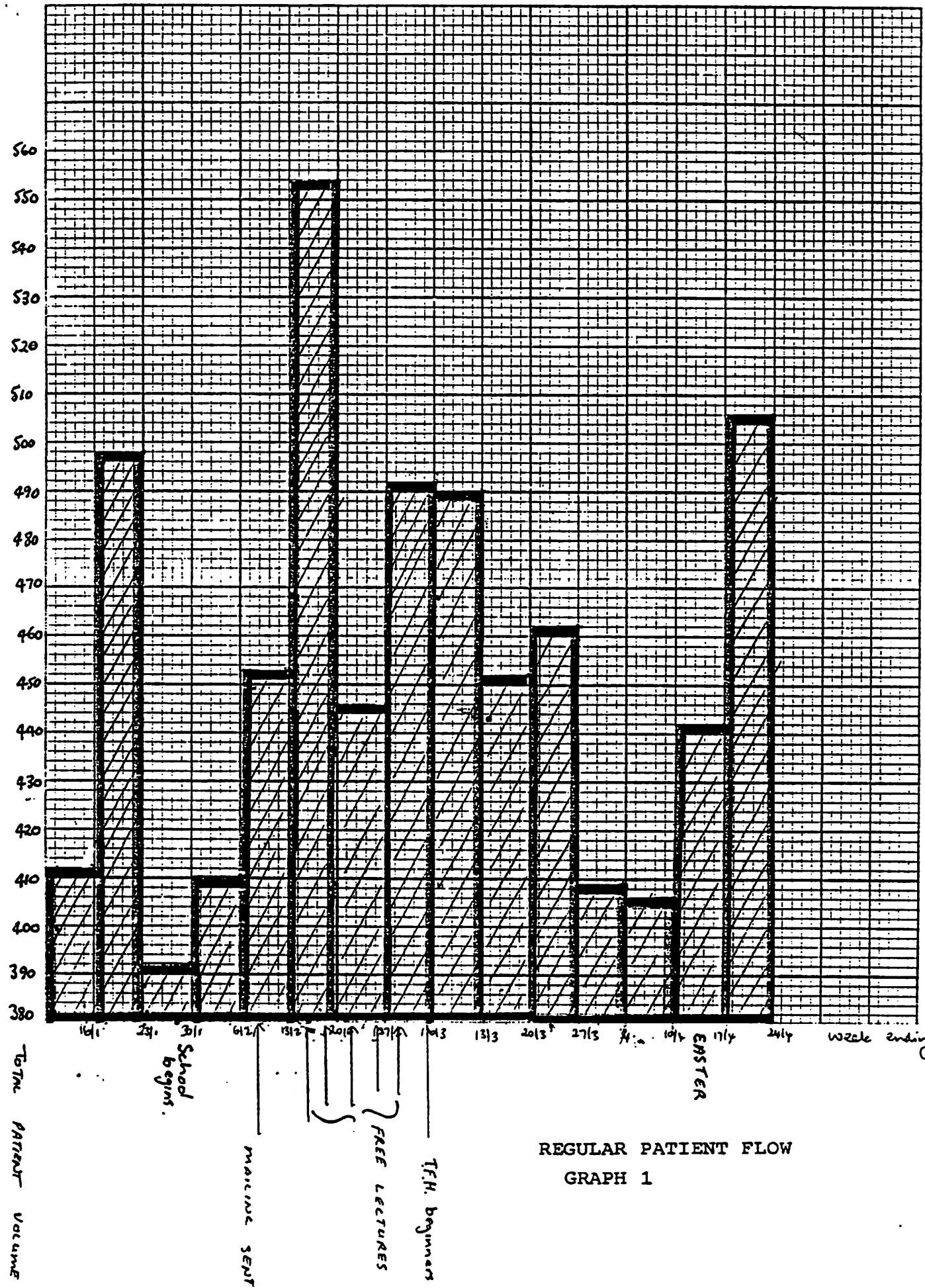
You are invited to bring your family and friends. Please call as soon as possible to reserve your seats. (511638) (513164).

Touch For Health is a Chiropractic First Aid program developed for families to learn how their bodies work, how to administer Pain relief and how to enhance each others energy. It involves learning about Muscle Position, action and organ correlation. Ways to reduce Stress, help the structural and dietary dimensions of the body are also included.

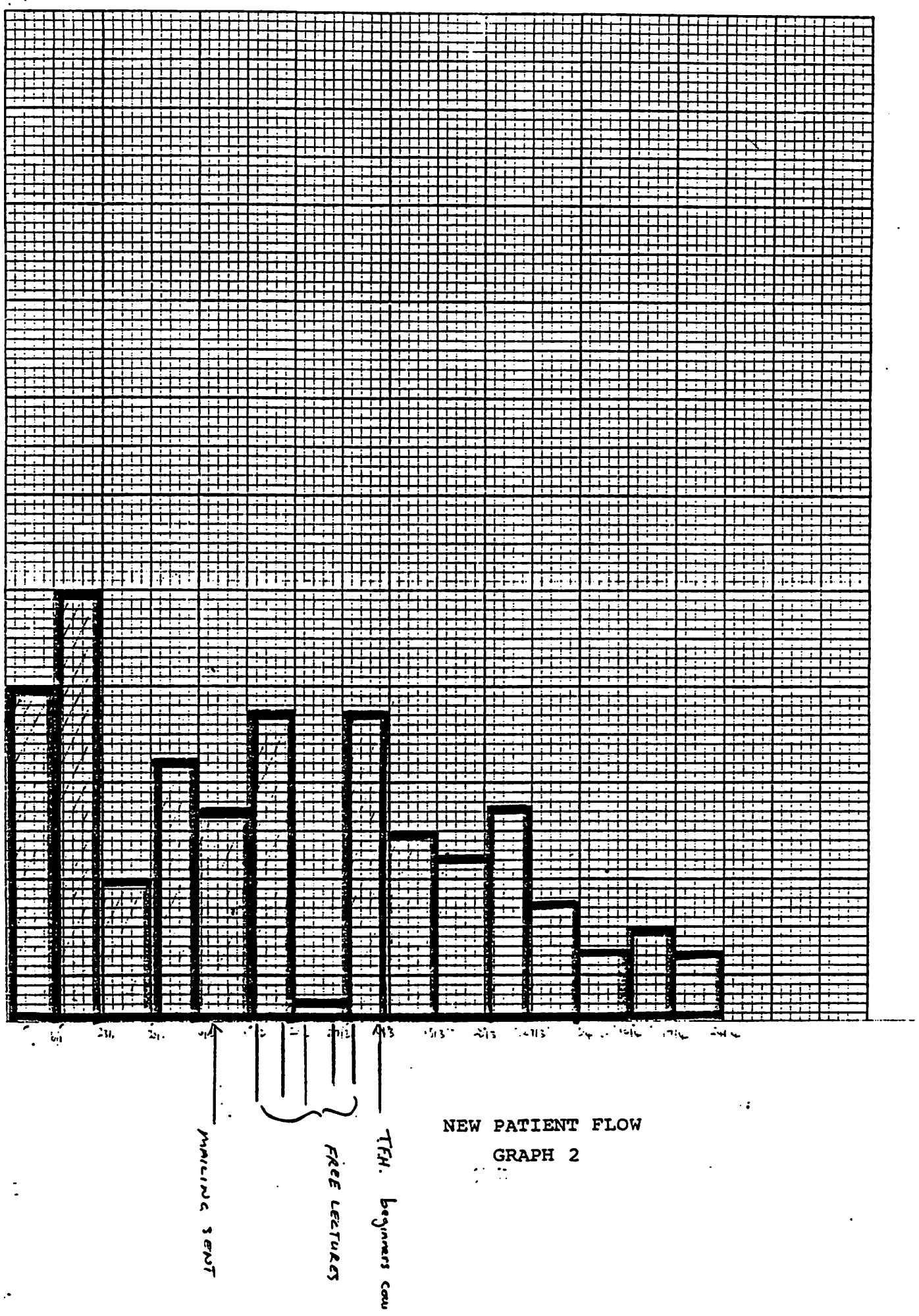
There is no cost for this lecture. It is provided as a Service to our Patients.

We look forward to seeing you.

DR DONALD McDOWALL
DR ALASTAIR PIRIE
DR DOROTHY MARSHALL



REGULAR PATIENT FLOW
GRAPH 1



NEW PATIENT FLOW
GRAPH 2

A STUDY OF THE RESULTS OF APPLIED KINESIOLOGY IN A GROUP OF 123 PATIENTS

by

DONALD A. McDOWALL, D.C.

ABSTRACT: To find out how effective our treatment and diagnosis was in an exclusive Applied Kinesiology practice a group of patients were selected for interviews. 123 were interviewed, of those, 118 felt better or had no reoccurrence of their problem. The study also showed that from a group of 213 people that we attempted to contact, 73 had moved from the area.

INTRODUCTION: My staff selected a group of 460 patients who had not received care for more than a year. We then conducted a telephone survey to determine the effectiveness of the treatment they had received using Applied Kinesiology procedures and to find out from patient feedback, weaknesses or criticisms of our system and approach.

METHOD OF STUDY: A random group of patient filès were selected for this study. The only criteria for selection was that the patient had not received treatment during the twelve months prior to December 1980. All age groups were included. Male and female discrimination was not attempted.
This study took place during a period of eight weeks during December 1980 and January 1981.

The receptionists conducting this survey were instructed to introduce themselves to the patient and make the following statement: "Good morning. My name is _____. Dr. McDowall asked me to call and find out if your problem had reoccurred?"

The receptionist then recorded each patient's name on a tabled sheet showing:

1. Whether or not the patient had been contacted.
2. Those who had no reoccurrence of their problem.
3. Those who had some reoccurrence of their problem.
   a) How many were better.
   b) How many were worse.
4. Those who had experienced no change.
5. Other comments were also recorded.

RESULTS:

Group A.

1.	Number of patients selected for the study	460
2.	Number of patients contacted	213
3.	Number of patients interviewed and accepted	123
4.	Number of patients not contacted	247

Group B.

1.	Number of patients contacted but not included in the survey	90
2.	Number of these who had moved from the area	37
3.	Number who had disconnected their telephone	36
4.	Number on vacation	5
5.	Number attending another chiropractor	7
6.	Number who felt they couldn't afford further treatment	4
7.	Number who found distance to the clinic too far to travel	1

Group C.

1.	Number of patients interviewed	123
2.	Number with no reoccurrence of their problem	84
3.	Number with reoccurrence but better	34
4.	Number with reoccurrence but now worse	2
5.	Number with no change	3

DISCUSSION: Our selection of 460 patients for this study yeilded only 213 telephone responses. This represents an effective contact of only 46.3%. Of this group, only 123 were eligible for survey interviews, or 26.7%.

The information in Group B illustrates some of the problems that we experience in having patients return for treatment. A surprising number of those patients contacted had moved or had their telephone disconnected (which also indicates the patient had moved for the purposes of our study). This represented a total of 73 patients in our group of 213 or 34.2%. Various other statements were made by the patients indicating difficulties they were having with our system or service which were comparatively less significant but were noted.

In Group C, of the 123 patients interviewed, we found 84 or 68.2% had no reoccurrence of their problem at all and 34 or 27.5% had experienced some reoccurrence but were better. A total of 118 patients or 95.7% had responded well with treatment and a majority had stayed that way for 12 months without requesting further treatment. A small percentage of of patients had responded initially but their problem

reoccurred and became worse. This represented 1.6% of this group. The number experiencing no change with treatment represented 2.4%.

CONCLUSION: This study was conducted in Canberra, A.C.T. Australia. This the seat of federal government with a high public servant population.

An interesting result of this study showed that a high number of patients had moved from the area and were not able to participate in the survey.

The results illustrated from Group C show that using Applied Kinesiology diagnosis and Chiropractic treatment produced effective results. The majority of people had not returned for further treatment because they felt their problem had not reoccured and had improved. Only a minor number had experienced no change or became worse when their problem had reoccurred.

T. M. J. DYSFUNCTION SYNDROME

and

THE SACRO-OCCIPITAL RESPIRATORY MECHANISM APPLIANCE (SORMA)

By Carl Mestman, D.D.S.

Abstract:

(1.) A method for determining when a TMJ patient should be fitted for a mandibular splint and how thick that splint should be is presented.
(2.) What constitutes a cure and what is just temporary alleviation of symptoms is discussed.
(3.) The swallowing reflex technique is described.
(4.) Body compensation and its effect on the total body harmony is investigated.

Today temporomandibular joint (TMJ) dysfunction is a popular term coined by many practitioners. Suddenly there has been a flood of so called TMJ experts advertising their skills and treating this condition as a total body skeletal dysfunction. Herb Anderson, D.C.(1) has taught me that this condition is really a disharmony of morphological, chemical and psychological conditions. The TMJ should be in harmony with the cranial bones, cervical vertebrae, shoulder and pelvic girdles in order that total body health be established.

Aelred C. Fonder, D.D.S.(2) in the "Dental Physician" concluded that mandibular-maxillary malalignment or TMJ problems have some relationship to the total body health.

N. L. Tinbergan(3) in 1973 won a Nobel Prize in medicine for showing that changes in alignment of body structure can affect the entire body health.

Weston Price, D.D.S.(4) in the 1930's demonstrated how nutrition and TMJ affected entire body health.

To paraphrase Dennis Steigerwald, D.C.(5) "The human body is truly an amazing mechanism of compensations in order to maintain equilibrium. A change in one structure causes other structures to move into positions of compensations. This change in position will usually cause temporary relief of some stress or symptoms elsewhere in the body until new symptoms or stresses occur. Now another change occurs and so on to the limit of tolerance of the individual. What is truly happening is a total body skeletal disharmonizing syndrome of which the TMJ dysfunction is only a part. We are really dealing with an orthopedic not orthodontic problem and the treatment should be orthopedic in nature".

The practitioner must be able to evaluate the patient wholistically. Should maxillo-mandibular disharmony be treated first? If the TMJ is treated first will it result in some other body structure compensation because the TMJ is not really the primary cause? Would treating other body areas first eliminate the TMJ because the TMJ was compensating for it? What modalities of treatment should be considered? Is any one method one hundred per cent effective? These are questions that must be considered.

Diagnosis of the patient's condition is most important. Is there a clicking or popping noise on opening and closing of the jaw? Is there deviation of the midline of the jaw to either the left or right on opening and closing of the mandible? These questions and many more like them can be obtained from "Clinical Management of Head and Neck" and "TMJ Pain and Dysfunction" by Harold Gelb, D.D.S.(6). The use of iridology by examining the iris of the eye according to Bernard Jensen, D.C.(7) and taught to me by my teacher Herb Anderson, D.C.(1) is most helpful. Palpating the tem-

poro-sphenoidal line as discovered by Major DeJarnette, D.C.(8) and developed by M. Rees, D.C.(9) helps to confirm your observations. The additional work of Dave Denton, D.C.(10) on the corresponding reflexes from the alveolar mucosa can aid in explaining some otherwise bizarre symptoms. In other words the more methods available the more accurate your diagnosis will be.

If clicking is present or was a problem before, then we are dealing with a malpositioned inter-articulating disc that has torn attachment ligaments. Depending upon how far out of position the disc is will determine treatment. This type of treatment requires that the disc be stabilized by bringing the mandible forward far enough to re-engage the condylar head within the concavity of the disc. Maintenance must be long enough to allow healing of the ligamentous fibers so that the disc will be retracted to its physiological position. This particular aspect of TMJ dysfunction is not the main topic of this paper and so I cannot at this time discuss it in depth. It is important to be aware of this condition.

If clicking or popping is not present, then it can usually be considered as not involving a torn disc ligament.

Many practitioners have been treating TMJ problems by relieving symptoms only. The short term relief of symptoms has been interpreted as a cure. Many of the patients that are referred to me are puzzled by the fact that at first they felt relief and then after a short lapse of time the symptoms began to return. I feel that any realignment of the mandible will usually cause a structural compensation elsewhere in the body that temporarily relieves present symptoms. Such a realignment is usually not

stable or physiologic and cannot be maintained permanently with the usual dental procedures. This non-physiologic realignment eventually breaks down again as further compensation is made. The primary compensation must be found and eliminated. Since all areas of the body are involved, it is impossible for any one practitioner to be expert in all body areas or even to have the time or equipment to be able to apply such. Therefore it is only through the cooperation of the different professions in a team approach that all or most of the compensations can be eliminated and that the patient can become so called "normal".

The sacro-occipital respiratory mechanism (SORM) concerns the relationship of the meninges or dura to the rest of the body. I thank Major DeJarnette, D.C.(8) and the late W. G. Sutherland, D.C.(11) for their research and development of the following knowledge briefly presented here. The dura is attached to the inner surfaces of the cranial bowl by its outer layer, the periosteum. The periosteum continues up and between the sutures and prevents ossification of the bones adjacent to these sutures. The slightest movement of a cranial bone is transmitted via the dura to the brain. The brain is aware of the slightest movement of each and every cranial bone. The dura then continues out through the foramen magnum to which it also attaches. It attaches to the first, second and third cervical vertebrae. Unattached from the fourth cervical it continues down to reattach again onto the sacrum and coccyx. The dura maintains a continuous connection between the cranium, the pelvis, and the thirty one spinal nerves. It is still taught in medical and dental schools that the skull is supported by the skeleton. I now know that the skeleton is really

suspended from the skull. Just as the puppet is suspended by strings from a rod so the skeleton is suspended from the skull by the dura respectively. As the skull bones move so moves the rest of the body. See Fig. #1.

Upon inspiration the occipital bone moves inferior and anterior while the base of the sacrum moves posterior and superior. See Fig. #2. This reciprocal motion is considered the norm.

Examine the patient by placing the palm of one hand upon the occipital bone and the palm of the other upon the sacral bone. Feel for the sacro-occipital respiratory motion. Using a tape measure, measure the chest expansion on inspiration and expiration. Determine that the respiration is normal and or reciprocal. Now place a tongue blade between the posterior teeth. See Fig.#3. observe the change in amplitude of respiration or tape measurement of chest reading. If respiratory amplitude or tape measure decreases, a splint is contraindicated at this time. This patient has cranial problems which need correction first. The cranial sutures are too tight and a splint would only jam the sutures and create an acute situation. Such a patient should be referred to a competent craniologist for treatment first.

If placing a tongue blade increases the respiratory amplitude, and chest tape measurement increases a splint is primary and should be considered first. Also, observe the patients thorax and thoracic spine. You can sometimes note a marked change in one or both.

Once it has been established that a splint should be constructed, the next question is how thick should the splint be? Break the tongue blade in half and join the two pieces to double the thickness. Place both pieces again between the posterior

teeth. If the amplitude or chest tape measurement continues to increase, then a thick splint such as a Dr. Wilbur May's type is correct. If the double blade causes the amplitude or chest tape measurement to decrease a thin splint is correct. See Fig. #4.

To determine the position of the jaw for a thin splint, the patient is in a supine position with a cervical pillow. The mouth should be clear of all removable appliances wherever possible. Use the hip-lock test. With the patient supine, take a straight leg with the knee locked in position and have the patient hold the leg at a 45° angle to the horizontal. With your left hand bracing the patient's hip, push down on the right leg with the right hand at the ankle, while you tell the patient to resist that motion. Have the patient occlude the teeth in different positions until the leg locks into the position with the least expenditure of energy. The patient must slide the mandibular teeth forward keeping the anterior teeth in contact until you find the strongest position of the hip-lock. Once the strong hip-lock is established, remove the cervical pillow. If the hip-lock weakens, it is usually an indication that there is a cervical compensation. The cervical area must now be treated before any other testing is done. Once the cervicals are clear, replace the pillow and find the hip-lock position again. Look at the space between the distal (posterior) teeth. This gives you an idea of the thickness of the thin type splint.

If the SORM indicates a thick splint, use the swallowing reflex technique of Dr. W. May to determine the jaw position and the thickness of the splint.

When using the SORM to determine the type of splint to use,

the splint is called a sacro-occipital respiratory mechanism appliance (SORMA).

The swallowing reflex technique is accomplished in the following manner. The patient is seated facing you on the bias. Have the patient turn head right, left, up and down. Note any limitation of movement, tightness or pain. Ask the patient to swallow as many times as possible in succession without stopping. Note the number of swallows and movement of head. Test a muscle kinesiologically with the teeth in occlusion. Note any weakness. Observe the pallor of the skin, especially on the ear lobes. Note the symmetry of the facial proportions and observe the position and depth of facial wrinkles. Observe the size of the eyes, level of eyes and lack of luster of eyes.

Soften red refined wax(12) in a water bath at 120°F.. Make two equal portions of softened wax about the size of half your thumb and place it bilaterally on the mandibular teeth in the region of the second bicuspids and the first molars. Have the patient sitting upright in the Alexander(13) position. Hold the patients wrists in your hands with your index fingers on the patient's arterial pulse beat. Make sure the patient is relaxed. In a softened tone of voice say, "I am making some soft wax pillows for you to rest your teeth on". After placing the wax have the patient rest teeth gently on the wax and close their lips. At your command to swallow, squeeze the patient's wrists to act as a biofeedback to the brain to indicate to the stomatognathic system that some contraction of musculature must take place in order to swallow. At the same time feel the patient's pulse. If you have done the technique correctly, you will feel a surge in the

patient's radial arterial pulse beat. The patient's eyes will come alive with brightness, the facial muscles will relax as the wrinkles begin to fade and the skin color will increase in redness as the vascular circulation improves. Instruct the patient to maintain this jaw position and not to open the mouth as you separate the patient's lips to see the amount of opening between the opposing anterior teeth. Test the muscle again kinesiologically. If the test is strong, you have achieved the correct position. The patient will feel good at this position. If the test is weak, repeat the above method until all the conditions are met.

Once the patient is in the swallowing reflex position, wait five to ten seconds or longer and observe the skin color, especially the ear lobes. Note the increased color due to the improved vascular circulation. Have the patient rotate head from side to side, up and down. Note the disappearance of tension or pain, the increased extension or flexion and increased lateral rotation. Now send the patient to the reception room to relax for three quarters to one hour. This allows the old proprioception of the compensated position to begin to fade out and the new proprioception to be established. Up to this time the patient has been chewing with the jaws in a compensated position which has established an engram within the brain. Allow the patient to sit with the jaws in the wax in position long enough to fade out improper imput and establish new imput to guide the jaws toward a better physiological relationship. During that hour it is a good idea to periodically check the patient to make sure that the new position has not been lost due to any stressful pressure of the

closing muscles. If this happens repeat the swallowing reflex technique.

When the hour is up,return the patient to the operatory and now proceed to transfer this new position to your pre-constructed flat surface acryllic splint.

The late Wilbur May, D.D.S.(14) of Albuquerque, New Mexico stated, "The teeth play a dual role as they give physiologic functional position for the mandible: (1.) Sensory end organ receptors for the nervous system. (2.) A part of the skeletal dimension of the head. The diagram of the Homunculus man showing approximately 50% of the dental nervous system, sensory and motor divisions are committed to the mouth and face is sufficient to impress us with the importance of this function. The basic rule of orthopedics that states a muscle works best when its skeletal support is in harmony with the working length of the muscle becomes so very important in the presence of prolific nerve connections"!

A toddler is usually off balance as he begins to walk and develops a pattern of tensing his major closing muscles; therefore the tight body muscles and the tight chewing muscles team up to restrict the full inherited dimension of the skeletal tissues of the head. Harold Ravens, D.D.S.(15) has termed this "the genetic vertical" for the head and evidence is suppporting the premise: any deficiency in genetic dimensions of the skull contributes to health problems. George Goodheart, D.C.(16) made an analogy to stress the importance of the TMJ by saying that it would be as if the TMJ had 3,000 homunculate nuclei compared to 100 nuclei for the hip joint.

It is important to understand that alleviating symptoms is not a cure. Some practitioners are claiming that symptom alle-

viation is a cure. I feel that a cure is only possible when all symptoms are eliminated for longer than six months. A cure also implies that the stomatognathic system not only is functioning physiologically, but that the system harmonizes with the cranial, cervical, shoulder and pelvic systsms. The mandible is in its correct relationship to the maxilla. All the muscles involved with the stomatognathic system function without stress. The patient can swallow continuously without stress, facial proportions are symmetrical and the jaw closure tests strong kinesiologically in harmony with the sacro-occipital respiratory mechanism (SORM).

It is extremely important to make the patient understand the progress of his or her treatment. I like to use the example of a dart target. See Fig.#5. Before any splint is inserted the darts are hitting the wall all around the target. As soon as a splint is inserted, and that is any kind of splint, you are now on the target. The patient immediately feels better. If you are not in the bullseye the feeling will begin to fade. Using the swallowing reflex technique puts you right in the center of the bullseye. Once the patient experiences this feeling he will always be dissatisfied until he is experiencing it again. In the bullseye the muscles of the stomatognathic system relax, and the jaw moves to a different position. The splint is made of plastic and has not changed. Unless you alter the surface of the splint, adjusting it to the new muscle position, the patient will move out of the bullseye at which time some of the previous symptoms will return. These symptoms do not return a little at a time so that the patient can learn to accomodate to them. They come back all at once and so the patient cannot accomodate and experiences bad

feelings. It frightens the patient into thinking that the treatment has failed. The patient thinks that all the original symptoms have returned because the patient feels them so strongly. By explaining ahead of time this aspect of the treatment and being able to anticipate the outcome, helps to aid the patient in accepting this without anxiety. Once you adjust the appliance the patient is back in the bulls eye and the treatment will proceed smoothly and rapidly.

It is most important to know that the teeth should never be ground down or equilibrated until it has been established that the maxillo-mandibular relationship is correct. The equilibration or grinding of teeth should then follow a precise and exact method. Nathan Allen Shore, D.D..S.(17) taught me a very good technique. He explained how the prematurity will be concealed by the use of thin articulating paper. The thinner the articulating paper the more the error. I refer you to his books for the details.

I hope this brief paper has shed some light on the need for intercommunication amongst the professions. The future healers will utilize the best of each modality to heal the patient. We can feel proud to be pioneers in preparing the way for our future successors. Sharing our knowledge for the good of mankind is an ennobling experience and I am pround to be a part of it.

References:

1. Anderson, Herbert, D.C. 25 Curtis St. Medford, Mass. 02155 Personal Communication (P.C.)

2. Fonder, Aelred, D.D.S., 303 W. 2nd St., Rock Falls, Ill., 61071; "The Dental Physician".

3. Tinbergan, N. L. Etiology of Stress and Disease,(Nobel Lecture, Sweden 1973) American Association for the Advancement of Science 185:20 1974.

4. Price, Weston, D.D.S., 2901 Wilshire Blvd., Suite 345 Santa Monica, California 90403, Nutrition and Physical Degeneration, Price-Pottenger Nutrition Foundation Inc.

5. Steigerwald, Dennis, D.C.,243 N. Highway 101. Solana Beach, California 92075, (P.C.)

6. Gelb, Harold, D.D.S., 635 Madison Ave. New York, New York 10017, "Clinical Management of Head and Neck", and "TMJ Pain and Dysfunction", 1977 W.B. Saunders Co., (P.C.)

7. Jensen, Bernard, D.C. N.D. "The Science and Practice of Iridology", Bi World Publishers, Inc. P.O.Box 62, Provo, Utah 84601

8. De Jarnette, Major Bertrand, D.C. Nebraska City, Nebraska 68410, "Sacro Occipital Technique", (P.C.)

9. Rees, M.L., D.C., 423 East Elm, Sedan, Kansas 67361, "Temporal Sphenoidal and Bloodless Surgery", Chataqua County Health and Research Clinic.

10. Denton, Dave D.C., 12381 Wilshire Blvd., Los Angeles, Calif., 90025, (P.C.)

11. Sutherland, W.G. D.C., 1140 W 8th Street, Medidean, Idano 83642, "Osteopathy in the Cranial Field" by Magoun, Cranial Academy.

12. Red Refined Wax, Yates and Bird 325 W. Huron St.Chicago, Ill. 60610.

13. Alexander Technique, by Sarah Backer, Bantam Books Inc. 1978

14. May, Wilbur D.D.S., Albuquerque, New Mexico (P.C.)

15. Ravins, Harold D.D.S. Preventive Dental Research Foundation, 436 N. Roxbury Dr. Beverly Hills, Calif. 90210 (P.C.)

16. Goodheart, George D.C. 542 Michigan Bldg. Detroit, Mich. 48226, (P.C.)

17. Shore, Nathan Allen D.D.S. "Occlusal Equilibrations and Temporomandibular Joint Dysfunction",J.B.Lipincott Co.,(P.C.)

The Craniosacral Mechanism

Figure 1. (9)

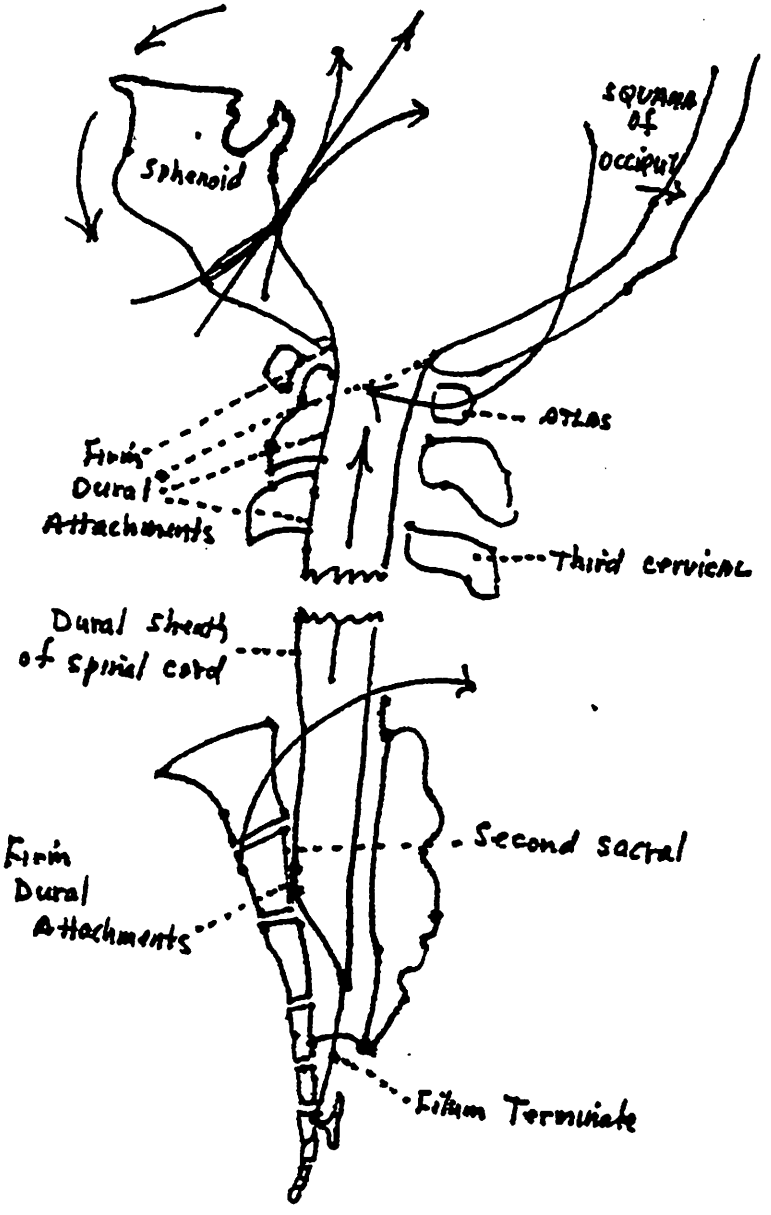


Figure 2.

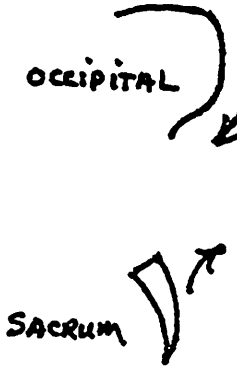


Figure 3.

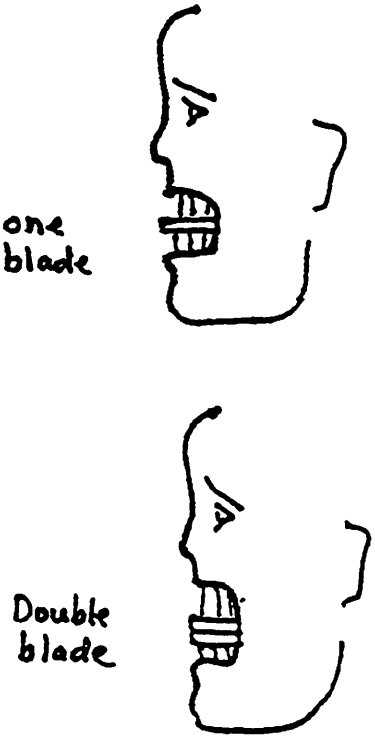
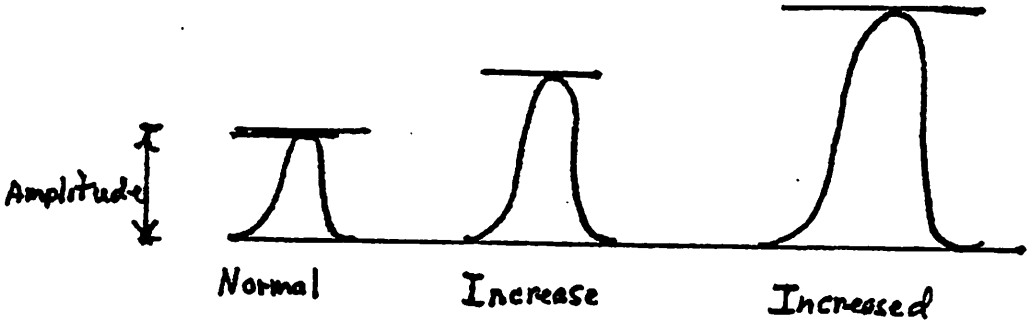


Figure 4.



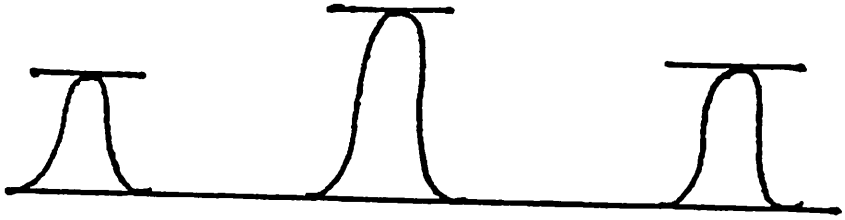
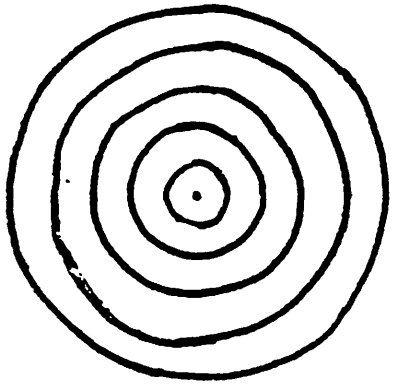


Figure 5.



DETOXIFICATION OF METALS

By: Carl Mestman, D.D.S. (Feb. 1982)

Abstract:

A method for detoxifying amalgams in the teeth, dental materials, and a discussion of methods for detoxifying foods is presented. Spray residue, metallics, pollutions and additives to food can be removed, restoring the normal energy to the food.

In the 1981 Collected Papers of the International College of Applied Kinesiology (ICAK), Jerold I. Morantz, D.C. did a study on the detoxification of dental amalgams as a result of my demonstration at the May 1981 ICAK meeting in Dearborn, Michigan. This short paper is intended to eliminate the confusion regarding the interpretation of my presentation.

Dr. Hazel Parcells of Albuquerque, New Mexico, demonstrated an invention of hers called a Thea-Lite. It is capable of detoxifying many materials contaminated with various metallics, spray residues, pollutants and additives. The Thea-Lite consists of a platform lamp as pictured in the attached photocopy. The platform contains magnets aligned in a certain manner. Magnets are also strategically aligned within the lamp shade. A patient was first muscle tested kinesiologically in the clear. The patient was then therapy localized with their index finger to a metallic substance. There was weakness. This indicated that the metallic substance was in some way toxic to the patient. The metallic substance was placed under the Thea-Lite for a few minutes. The patient was again therapy localized to the metallic substance and this time tested strong. Somehow the magnetized light altered the metallic substance so that it was no longer toxic to the patient. Some

materials required a few moments of exposure to the Thea-Lite and some required fifteen minutes or longer. The patient felt the difference immediately.

I purchased several Thea-Lites and used them for over a year. At home my wife treated all our food, clothing,cosmetics and tools. In the office I treated all my dental materials before utilizing them. Patients who suffered from burning mouths when in contact with complete or partial dentures were immediately relieved. All my dental splints were so treated. Some patients were referred to me just to detoxify their splints. As time passed I discovered that patients could actually therapy localize the restorations in their mouth. Some would show slight weaknesses, some no weakness, and others extreme weakness. It would be extremely awkward to place a patient's head under the Thea-Lite, so I began to develop a method of applying this principle within the oral cavity. It became apparent to me after a long period of investigation that the Thea-Lite worked on the principle of polarized light. If all the atoms of a structure are moving in different directions you have a condition of depolarization or sensitivity to noxious stimulation. When the metallic substance was treated by the magnetized light, the atoms were lined up parallel to one another or polarized. When this occurred, the metallic substance was no longer noxious to the patient. I discovered that the north pole of the magnet pulled some substance in the light through the metallic substance in such a way as to polarize its structure. The north pole withdraws energy and the south pole adds energy. I then tried to affect the amalgams in a patient by placing the north pole of the magnet on the outside cheek of the patient with the north pole facing inward

toward the teeth in question. A fiber optic light was placed inside the mouth on the tongue side of the teeth and the beam of light was directed through the teeth containing the amalgams making sure that the magnet was lined up directly opposite to the beam of light so that the beam of light was pulled through the amalgamated teeth. It required a treatment time of only a few seconds and the muscle then retested strong on therapy localization . The effects of the treatment lasted indefinitely in this patient because the restorations were sound and the bite correct.

I found that many of my patients were sensitive in varying degrees to the restorations in their mouths. By therapy localization it was possible to elicit a very weak muscle response in patients that were suffering quite extensively from some serious health problems. There were also patients that did not elicit any response to therapy localization. It became apparent to me after long periods of observation and clinical application that certain patterns were present. A strong and relatively healthy patient would probably not elicit a muscle weakness to his restorations because his nervous system was capable of resisting the noxious influence of the restorations. If the restorations were sound, (not loose), again no muscle weakness would result. The absence of temporomandibular joint (TMJ) dysfunction would also give no muscle weakness. If the restorations were loose and leaking so that each time teeth occluded a noxious substance was released, a weak muscle response would occur. There is evidence to suspect that even a sound restoration releases some noxious stimuli. The presence of TMJ Dysfunction would reduce the ability of the body

to handle the noxious stimuli and therefore cause a weakening of a muscle on therapy localization.

No attempt was made to check the challenge of the neurologic tooth. I don't believe there is a connection there. This method simply removes the effects of the noxious stimuli released from the restorations, faulty or sound. What is truly released from these restorations remains to be investigated.

I have found that cold sores, canker sores, and other painful oral lesions are all relieved to some degree and sometimes completely by treatment with this modality.

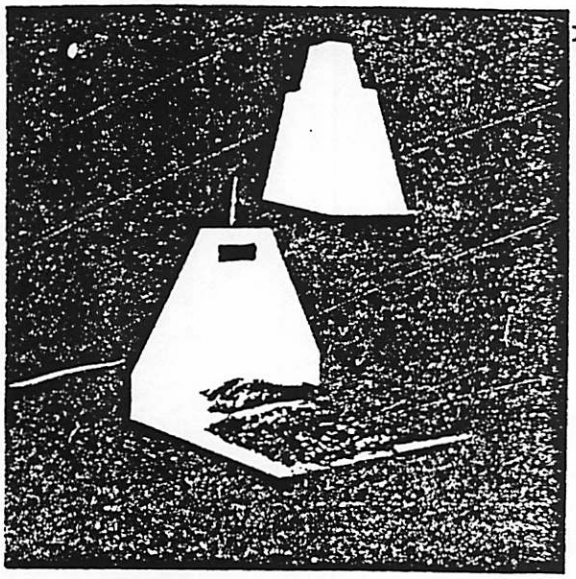
At a seminar a doctor had a very painful abcessed tooth. One treatment of a minute with the magnet and fiber optic light reduced the pain to an acceptable level so that the doctor could stay at the seminar and see his dentist the next day.

I believe that there are probably many more uses for this technique and further investigation is needed to discover what they may be.

Patients suffering from any type of debilitating disease i.e., multiple sclerosis, muscular dystrophy, etc., in my opinion should have all metallic restorations removed and replaced with plactic types pretreated by the Thea-Lite.

I hope this short paper has cleared any points of controversy and confusion.

DR. HAZEL R. PARCELLS
1605 Coal Ave.
Albuquerque, New Mexico 87106



THEA-LITE

THEA-LITE IS ... MUCH MORE THAN A LIGHT - IT'S USES ARE MANY.

It's efficiency lies in the combination of light energy and the base which acts as a ground for the action that takes place in a strong magnetic field.

THEA-LITE is the result of years of research in many fields.

It's greatest action is removing the SPRAY RESIDUE, METALLICS, POLLUTIONS and ADDITIVES from the food we use every day - restoring the normal energy of the food being processed.

* INSTRUCTIONS FOR USE *

-- Place anything in the food line (Milk, Cream, Butter, all Cereals and Grains, Beans, Rice, Meats, in fact anything and everything) under the light.
-- The timing is governed by the density of the product. Small amounts like Potatoes, Apples, Root Vegetables - 10 to 20 minutes. Larger amounts - 20 to 30 minutes.
-- Do not forget that everything you buy has PRESERVATIVES and INSECTICIDES of all kinds in them.

The energy field in THEA-LITE removes them.

-- There is NO harmful reaction if there is an over-exposure.
-- There have been several surprise statements in regards to allergies. When the food had been exposed to the light, there was NO allergic reaction. This has a great message for those suffering from food allergies!

APPLIED KINESIOLOGY SUPRA LEARNING

Emil F. Morlock, D. C.

Abstract

This paper contains my impressions of the Applied Kinesiology Supra Learning tapes and their value to students and future students of applied kinesiology.

I purchased at our annual 1982 I.C.A.K. meeting in Detroit the Applied Kinesiology Supra Learning (AKSL) tapes composed by Dr. Evan Mladenoff of Toronto, Canada, covering the first hundred hours of basic applied kinesiology.

Dr. Mladenoff has combined several modern learning techniques with his teaching of applied kinesiology into a truly unique and excellent piece of work. The tapes will help the beginning students as well as the seasoned diplomate in both learning and teaching procedures.

Side one of all tapes starts out with instructions for relaxation which put the listener into an alpha wave rhythm which seems to be conducive to learning. Next, a breathing pattern is established while the listener reads from a kinesiological teaching manual which is programed to coincide with the tape voice. The tape voice is modulated to speak soft,

loud and normal which keeps your attention and seems to drive home the information.

Side two eliminates reading, replacing it with rhythmic music which seems to take advantage of right and left brain activity, consequently maximizing learning.

Summary: My impressions are that Dr. Mladenoff has tapped a learning tool which can expand and spread applied kinesiology to unlimited horizons.

A HIGHLY EFFECTIVE POULTICE APPLICATION FOR EXTERNAL WOUNDS AND INFECTIONS.----

Clarke C. Odden, D.C.

ABSTRACT: Presenting a formula made from three commonly available herbs and botanicals for use in the healing of infected wounds, ulcerations on the skin, etc.

The history of my use of this medium begins while I was still a student at Logan Chiropractic College. In my undergraduate work there, as in most colleges of the time, there was little or no time spent in the use of specific nutritional therapeutics or herbs and botanicals. I was, however, very fortunate to be exposed to this particular remedy and it has served me very well over the years.

Penny, whom I later married, had gone for a long walk one day and had sustained a blister on her heel which subsequently had broken and become infected. Over the period of six weeks everything that could be done for her at the Clinic was done. Although she had the best adjusting then available, results were not forthcoming. The wound would simply vary in size, becoming larger for a few days and then getting smaller again. It remained approximately the size of a quarter and had to be kept bandaged as it was draining most of the time. Satellite lesions also began to show up the back of the calf and lower thigh, and vascular streaking was evident. Initially I had thought that it would be concluded in a matter of days. When I began to see signs of a more extensive problem I became worried. At this time, I was in my second year at Logan, and had no idea where to turn other than the clinic. At no time did we consider medical therapy or antibiotics.

In telephone conversations with Penny's father, Dr. F. K. Dawson, he also became alarmed about the situation and had a conversation with an acquaintance of his who was

well versed in the use of herbs and nutrition. Mr. A.S. Wheelwright had worked for Standard Process for several years and had extensive self study in this area and gave Dr. Dawson a suggestion about 'something that might work'.

The specific formula for a poultice was related to us by phone. The materials were quickly obtained and the first application was made that same night. We were told that we would need to apply the dressing several nights in a row. I carefully mixed the ingredients, being well aware that I knew absolutely nothing about this area of healing and we applied it to the primary lesion on the heel.

By the morning after the first application, all the satellite lesions up the leg had disappeared and the primary lesion was completely healed over. The inflammation and the swelling had dissolved. We made one more application the following night. Thereafter, the wound was healed and never reappeared. A slight burn scar remained for several weeks but then it, too, disappeared. There were never any further signs of infection or injury.

Over the last 19 years of my practice life, I have had many occasions to use this poultice and have never been disappointed in the results. I have used it on minor problems and some major infectious sites and have always had good results. Since college I have spent considerable study in therapeutic nutrition and botanicals, but have never come across a formula that has gained my confidence as much as this. Before giving you the best part, let me cite two examples.

Case1. An associate D.C. who worked (not very much, however) in my office for about a year sustained a bad leg and arm injury from a motorcycle accident. Among other contusions and abrasions, he had scraped his right hand quite badly on the asphalt.

3.

The wound was open, the hand was swollen and inflamed and the day after the accident he asked me for advice and help- which advice I gave and which he promptly ignored. By the third day when outright signs of infection were beginning to show and he was unable to care for patients, my office assistant, Carla, went to the nutrition center, obtained the necessary materials. The poultice was applied that evening and by the following morning all swelling, infla mmation and drainage were gone. The only thing he asked me was why the Neosporin hadn't worked along with the epsom salt soaks he had been using before.

Case 2. Another patient of mine who is the head dataproc- essor for a nearby hospital had cut his hand on the sharp edge of a soiled linen container. Within 24 hours it had begun to swell, inflame and drained slightly. With his aversion of medical treatment, et al developed from many years of observing medicine in action, he approached me about some help. Again, the formula was employed and within 48 hours the wound was healed. In all fairness, Imust tell you two things; 1. an M.D. at the hospital had seen the problem and had given him some antibiotic to take 'just in case'. He had taken one of these 48 hours before seeing me. It had upset his bowel and he had taken no more. 2. The same M.D. had taken a culture and had determined that it was a staph infection.

As the ingredients in this formula are common and easily available, I will not give you specific bibliographic references. It should be very easy for you to read about the individual items involved.

My instructions to the patient are to purchase small amounts of each substance as they will probably not have to use it more than 1-4 days.

4.

This recipe is enough for application to a relatively large open wound.

Flaxseed meal	1 TBSP
Hyssop powder	1 TSP
Golden Seal powder	a pinch (less than 1/8 tsp)

Mix the above with enough water to make a heavy paste- wet, but not drippy. It should be molded into a semi-flat rounded shape to fit over the area. Insert this between the fold of a 2x2 gauze pad (consistent with the size of the wound)- and tape or wrap lightly in place overnight. Remove in the morning and give the area some hours of sun or open air, if appropriate. Reapply as often as necessary to full resolution. Make fresh for each application.
Remember that the continued use of Golden Seal internally tends to deplete Vitamin B complex. It you do require more than two applications, consider some B support. Do not, however, mix any Vit. B in with the formula as it will irritate or burn the wound more. Golden Seal can also be used simultaneously for internal support along with other natural anti-infectives.

This formula, used properly, has always been successful for me. I appreciate sharing it with you and hope that it serves you and your patients also.

Clarke C. Odden, D.C.

SELF HELP ACUPRESSURE CLASSES

Clarke C. Odden, D.C.

BRIEF: Presenting an outline used successfully in teaching lay classes on basic formula finger acupressure.

The following outline has been successfully used in my teaching of 16 hours of lecture/workshop in this very popular subject. Classes have been offered to patients and interested friends and relatives through handouts at the office and by word-of-mouth.

Those doctors who work regularly in the field of general acupressure or with specific A-K procedures should have excellent background for such a class. This is an excellent method of increasing patient awareness of chiropractic, and for increasing patient inflow and general PR in the community.

As you can readily see in perusal of these pages, an attempt has been made to present to the students the basics of this subject. Emphasis is first made to the fact that none of the technics presented will be taught in such a way as to make any harm for anyone. With the use of the patterned note structure the student can absorb at his own rate and can activate both right and left hemispheres according to ability and study. Those who choose to become more involved in the complexities can do so, but everyone is presented with the same basics. The doctor can elaborate on any area or point as much as the class will absorb and still not leave anyone behind.

Classes are presented 2 hours weekly for eight weeks and are primarily hands-on workshop. I try to give enough background philosophy and general anatomy for comfort sake, in the first two sessions. Great emphasis is made on knowing meridians, alarm points, and body proportions so that a person can move into other texts without being confused too much by other terminologies and systems.

page 2 acupressure class.

I have prepared myself a class leader's manual (differantly colored cover) in which I keep all my own notes and elaborations that may be necessary. In this manner I hope to accumulate a body of working material that can expand over the period of time that I give the class and make my presentation more consistent.
Several pages of plain paper notes are provided as well as 6-10 of the blank body charts for the student to use in marking formulas for certain conditions and body areas.

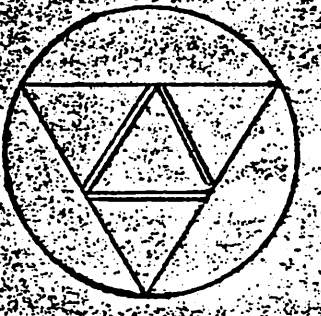
The elaboration of the triangular diagram is given to the class as a paradigm for their own consideration of optimal health systems. The idea of long-term health management is also stressed, not only the treatment of symptoms and acute conditons.
A-K demonstrations are used to show the immediate effect of the point work, but no attempt is made to teach any muscle testing, TFH, etc. The class itself is asked to supply me with the names of conditions for which they would like points of application.
I expect to expand and continue this type of work. To date it has been very successful.

Clarke C. Odden, D.C.

SELF-HELP ACUPRESSURE
LECTURE & WORKSHOP SERIES

DR. CLARKE C. ODDEN
CHIROPRACTIC PHYSICIAN

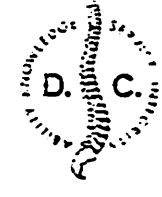
3902 OGDEN AVENUE
OGDEN, UTAH 84403
801 - 621-1411



ACUPRESSURE IS A CONTEMPORARY APPROACH TO THE NON-INVASIVE USE OF ACUPUNCTURE PRINCIPLES IN HELPING PEOPLE 'BE' WELL. IT IS A HIGHLY EFFECTIVE AID TO IMPROVED HEALTH. IT CAN HELP PREVENT ILLNESS & HELP YOU TO, IN SOME WAYS, FORETELL POSSIBLE HEALTH PROBLEMS. IN THIS BASIC CLASS & WORKSHOP SERIES, YOU WILL BE TAUGHT HOW TO USE POINTS ON THE BODY FOR THE ABOVE PURPOSES. IT IS NOT INTENDED TO MAKE YOU A PROFESSIONAL, BUT FOR YOUR OWN SELF-IMPROVEMENT. YOU WILL NOT NECESSARILY 'KNOW EVERYTHING' ABOUT THIS FASCINATING FIELD, BUT YOU WILL KNOW A GREAT DEAL, AND YOU WILL BE ABLE TO APPLY IT TO PRACTICAL ENDS. IT IS MY PLEASURE & PRIVILEGE TO SHARE WHAT I KNOW - WITH YOU.

ENJOY!

D.L. CLARKE ODDEN

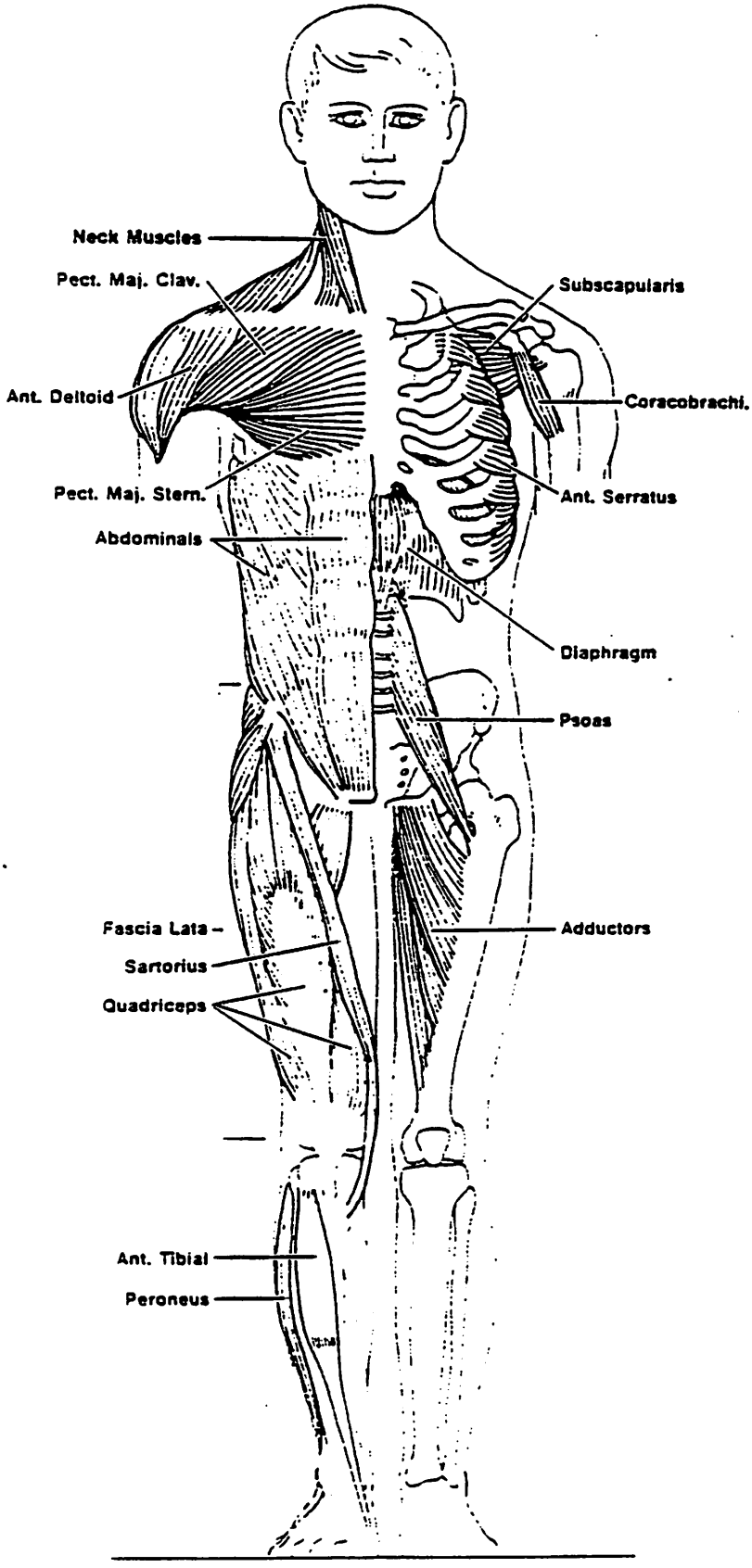


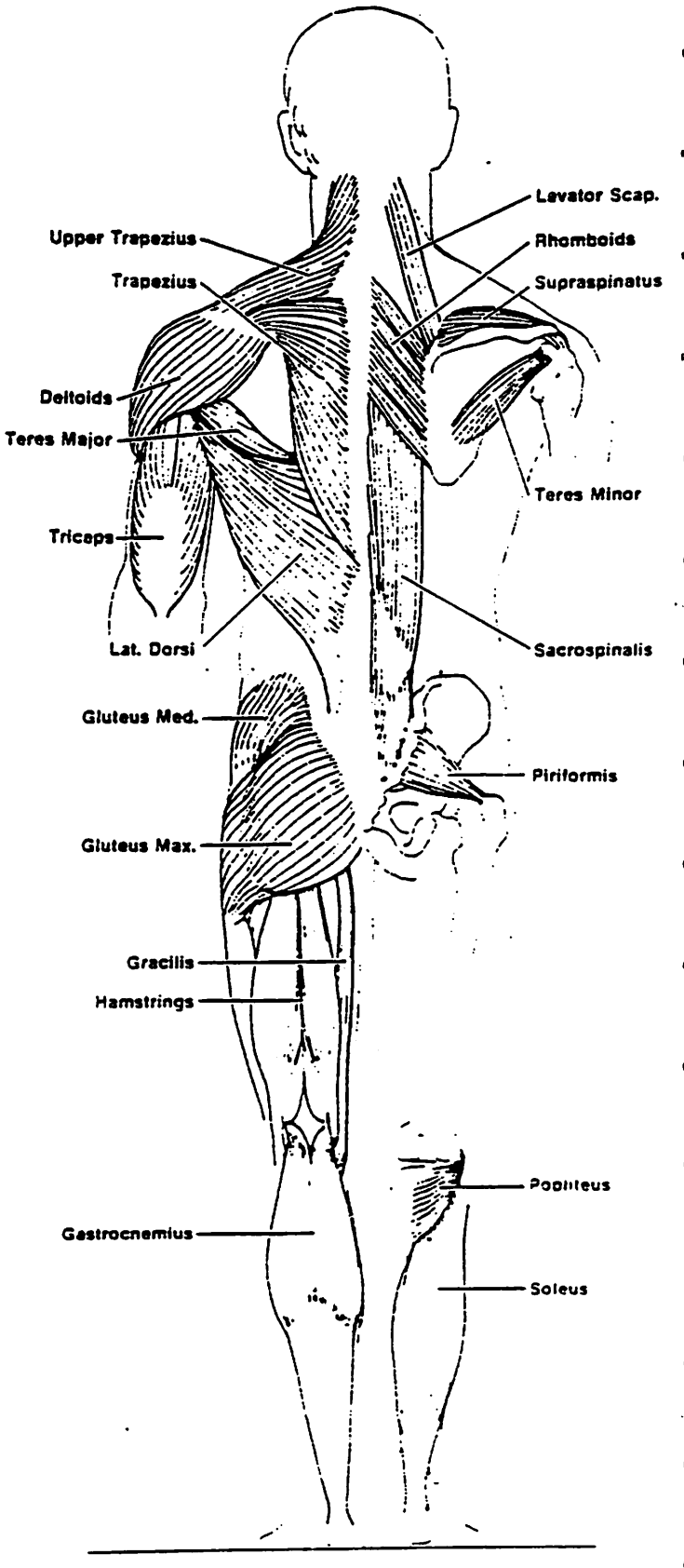
Clarke C. Odden
Doctor of Chiropractic
3902 Ogden Avenue
Ogden, Utah 84403
621-1411

Suggested Reading and Reference Texts

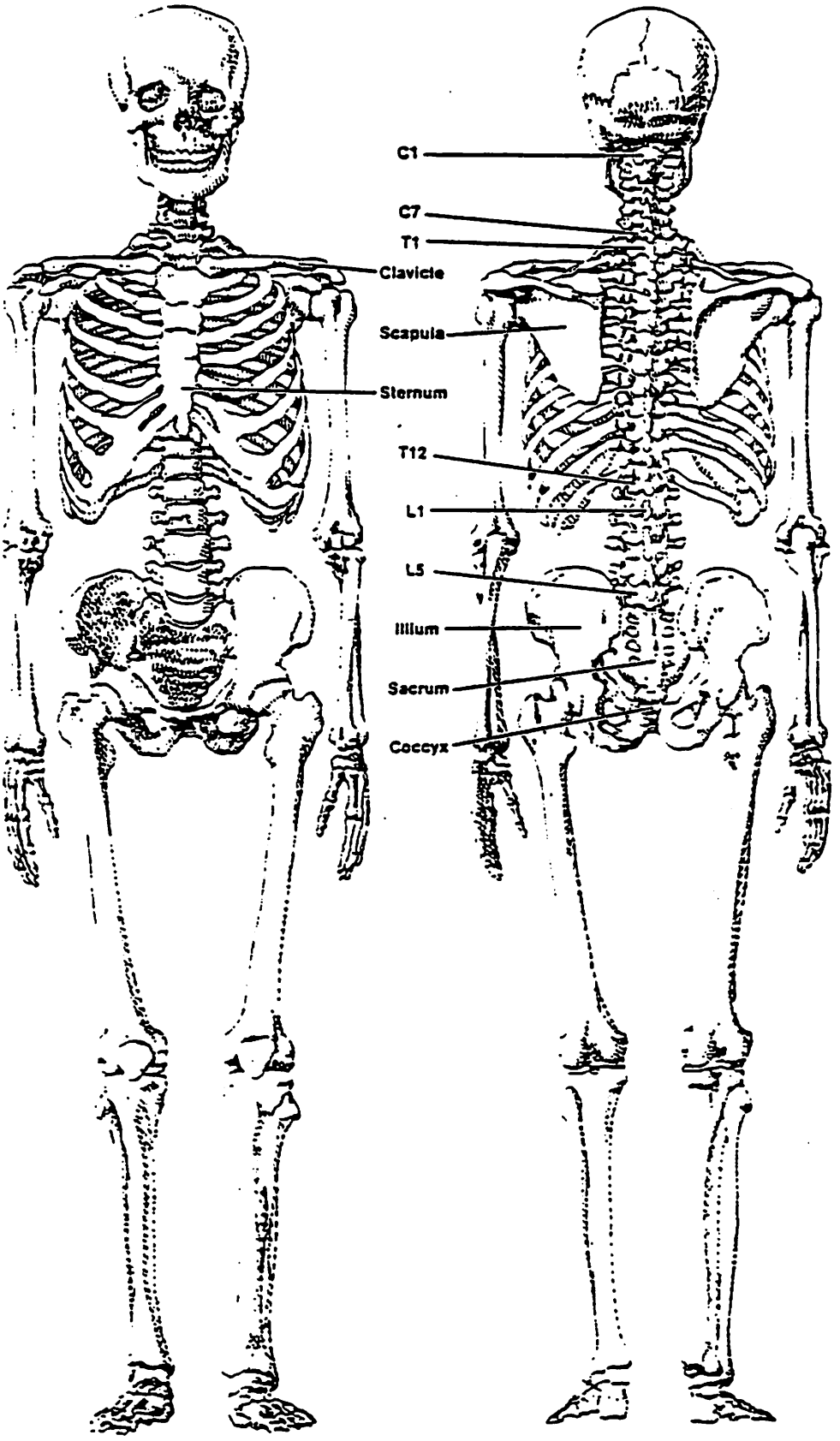
1. "Acupuncture, The Ancient Chinese Art of Healing" - Felix Mann M.B.
2. "Acupuncture Without Needles" - J.V. Cerney
3. "A Barefoot Doctor's Manual" - Cloudburst Press of America - 1977
4. "The Acupuncture Treatment of Pain" - Leon Chaitow
5. "First Book of Do-In" - Jaques DeLangre
6. "Second Book of Do-In" - Jaques DeLangre
7. "Japanese Finger Presure Theory - Shiatsu" - Tokujiro Namikoshi
8. "Sexual Acpressure" - Warren & Fischman
9. " Oriental Methods of Mental and Physical Fitness" - Pierre Huard & Ming Wong
10. "Acupressure Way of Health - Jin Shin Do" - Iona Teeguarden
11. "Finger Acupressure" - Pedro Chan
12. "The How to Seminar of Acupuncture for Physicians" Pennell & Heuser
13. Association for Holistic Health - P.O. Box 23231, San Diego, CA 92123

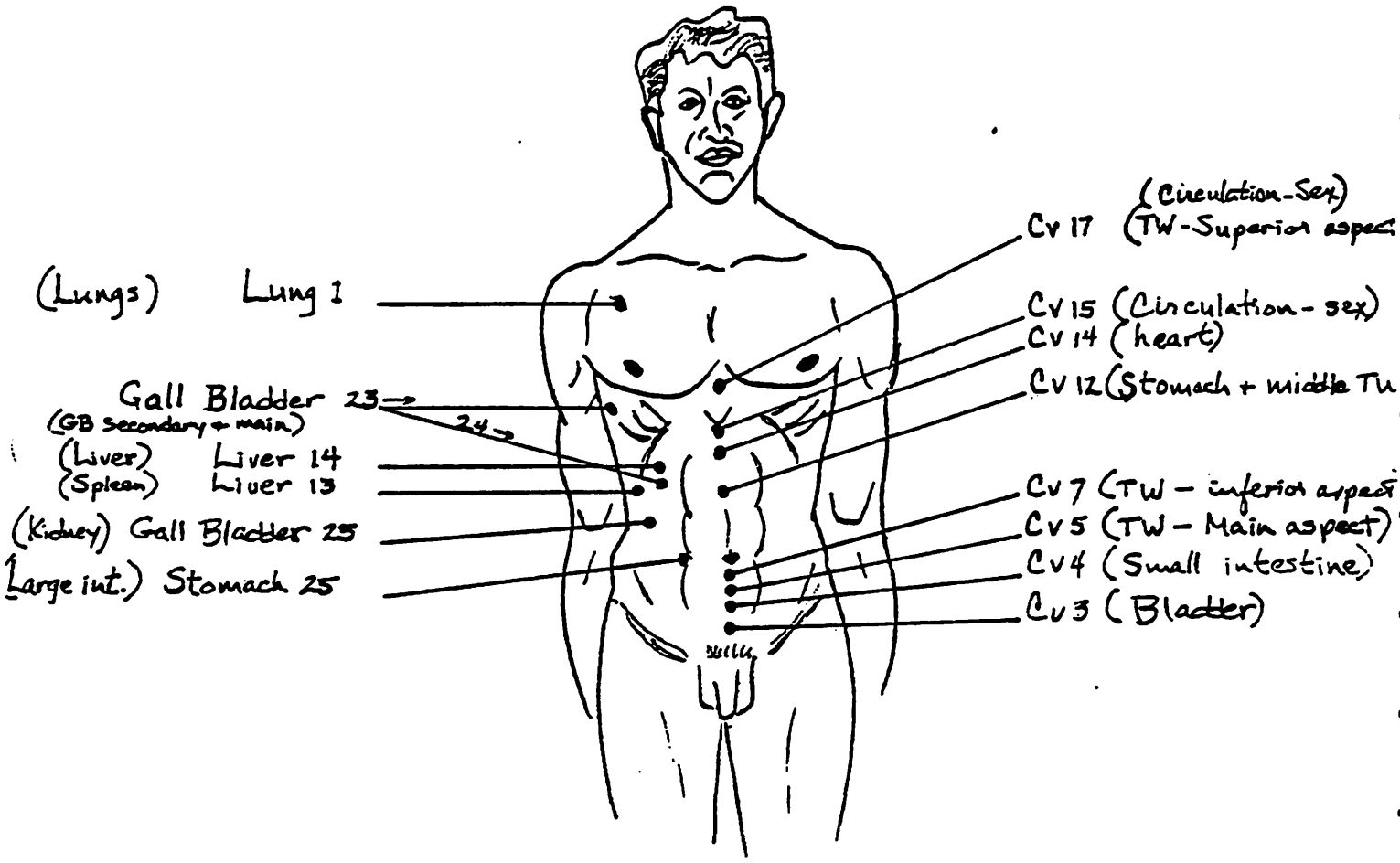
MYOLOGICAL SYSTEM
or
MUSCLES THAT MAKE UP THE BODY



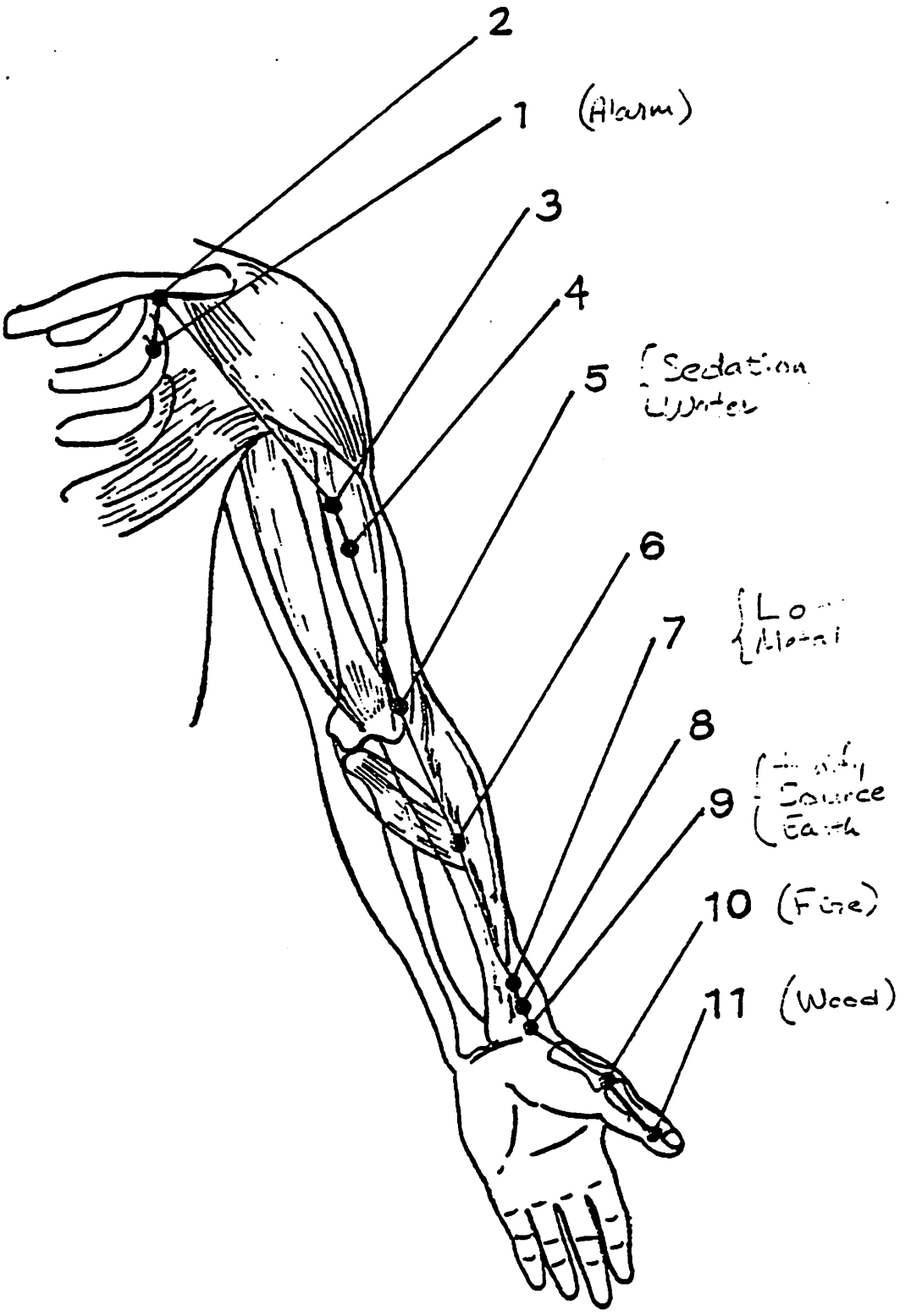


SKELETAL SYSTEM

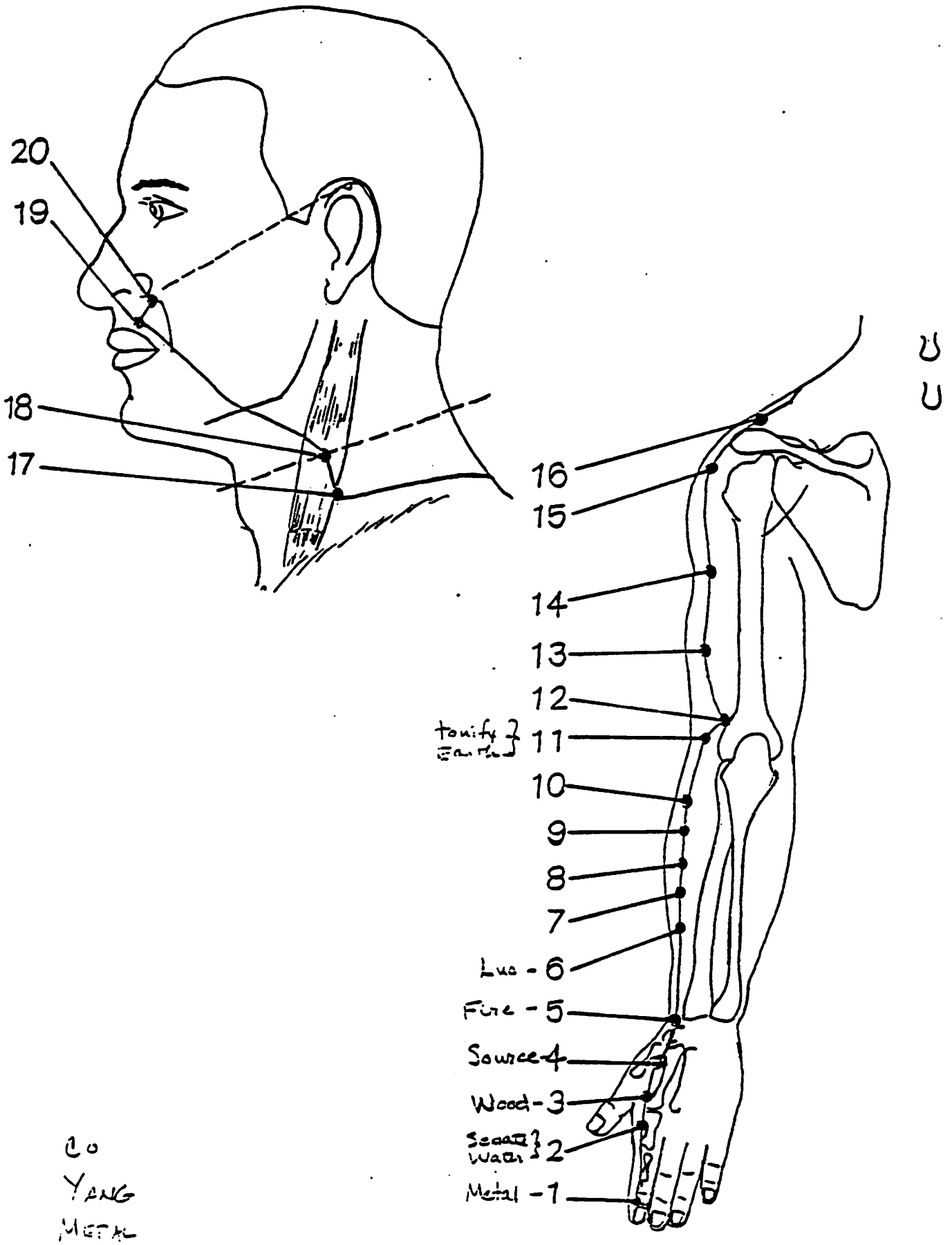




Alarm points

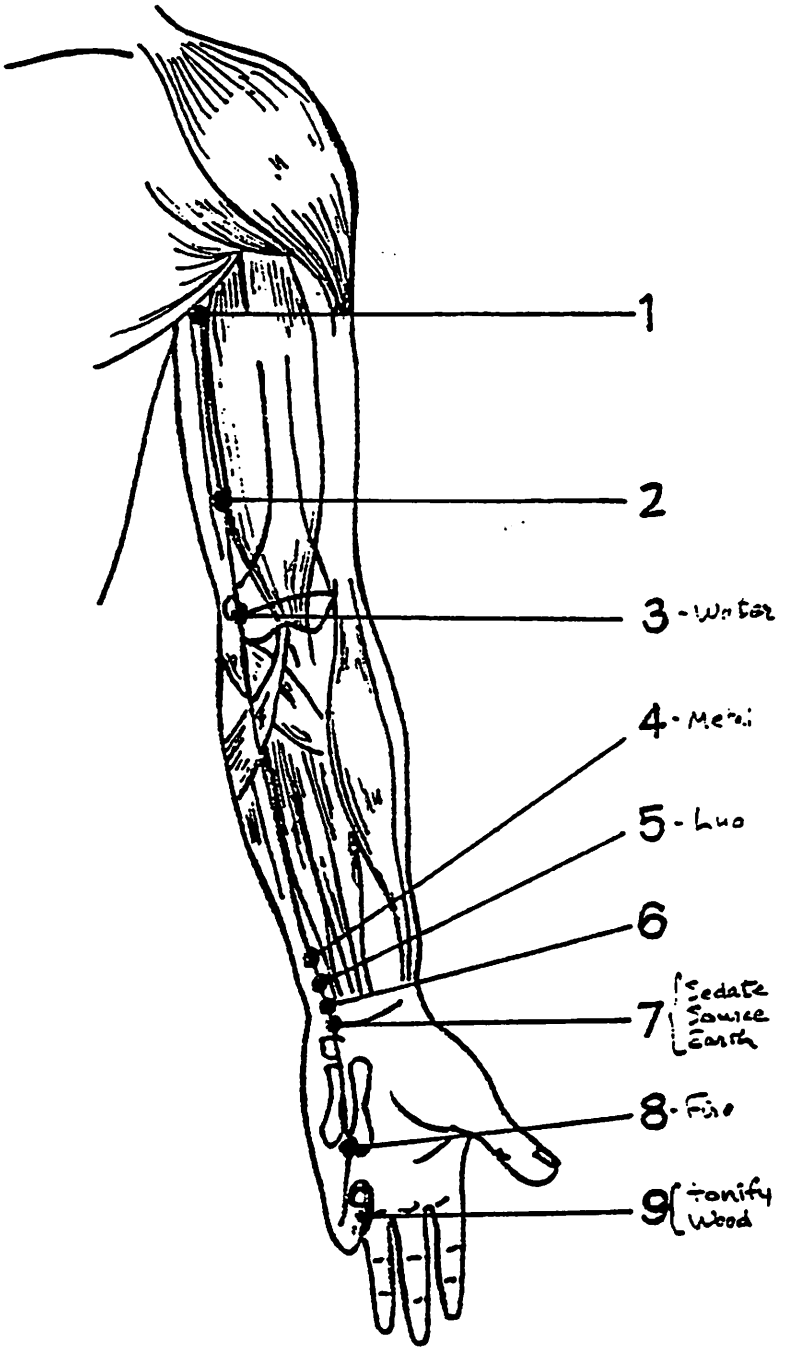


Lu
YIN
METAL

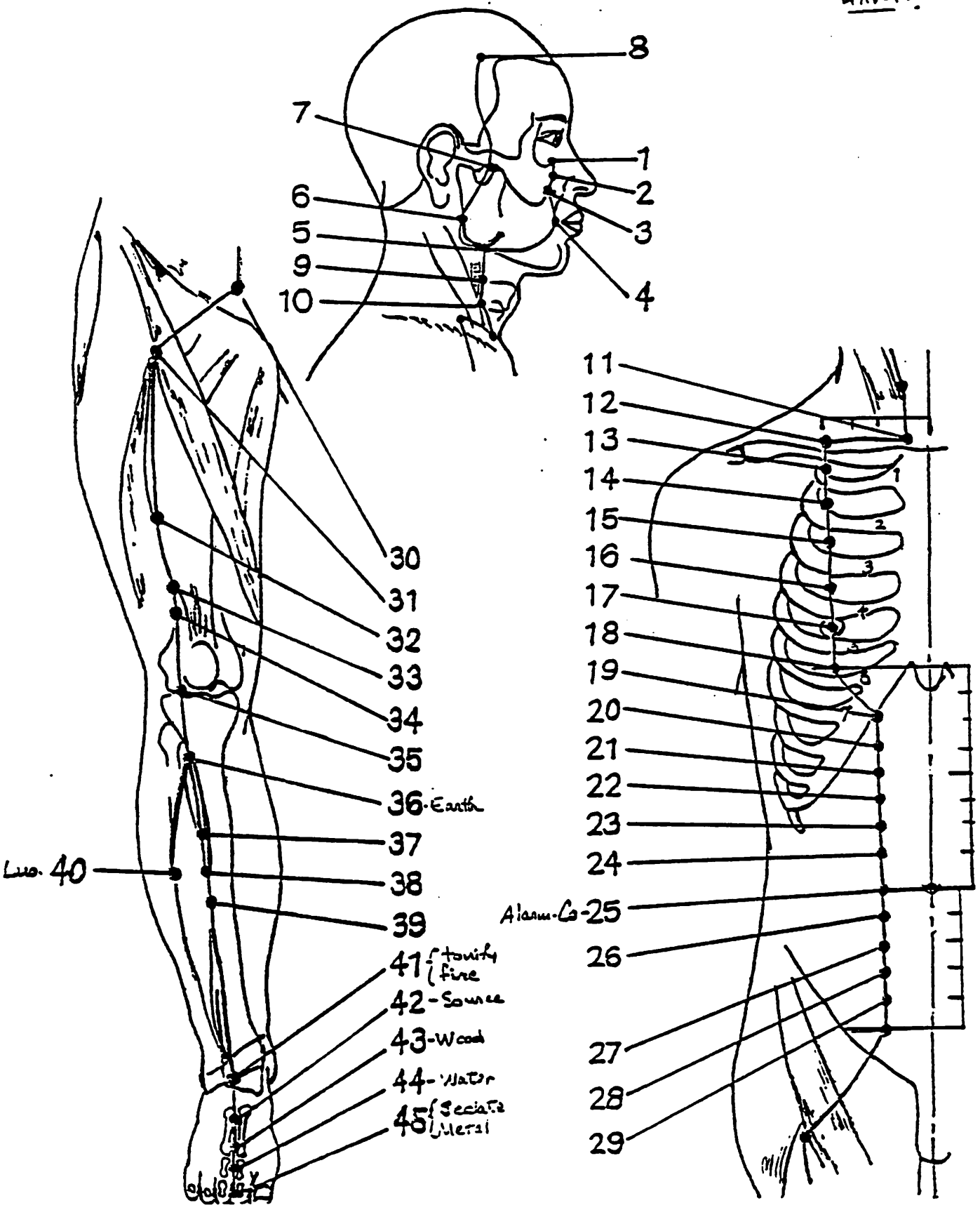


10
YANG
METAL

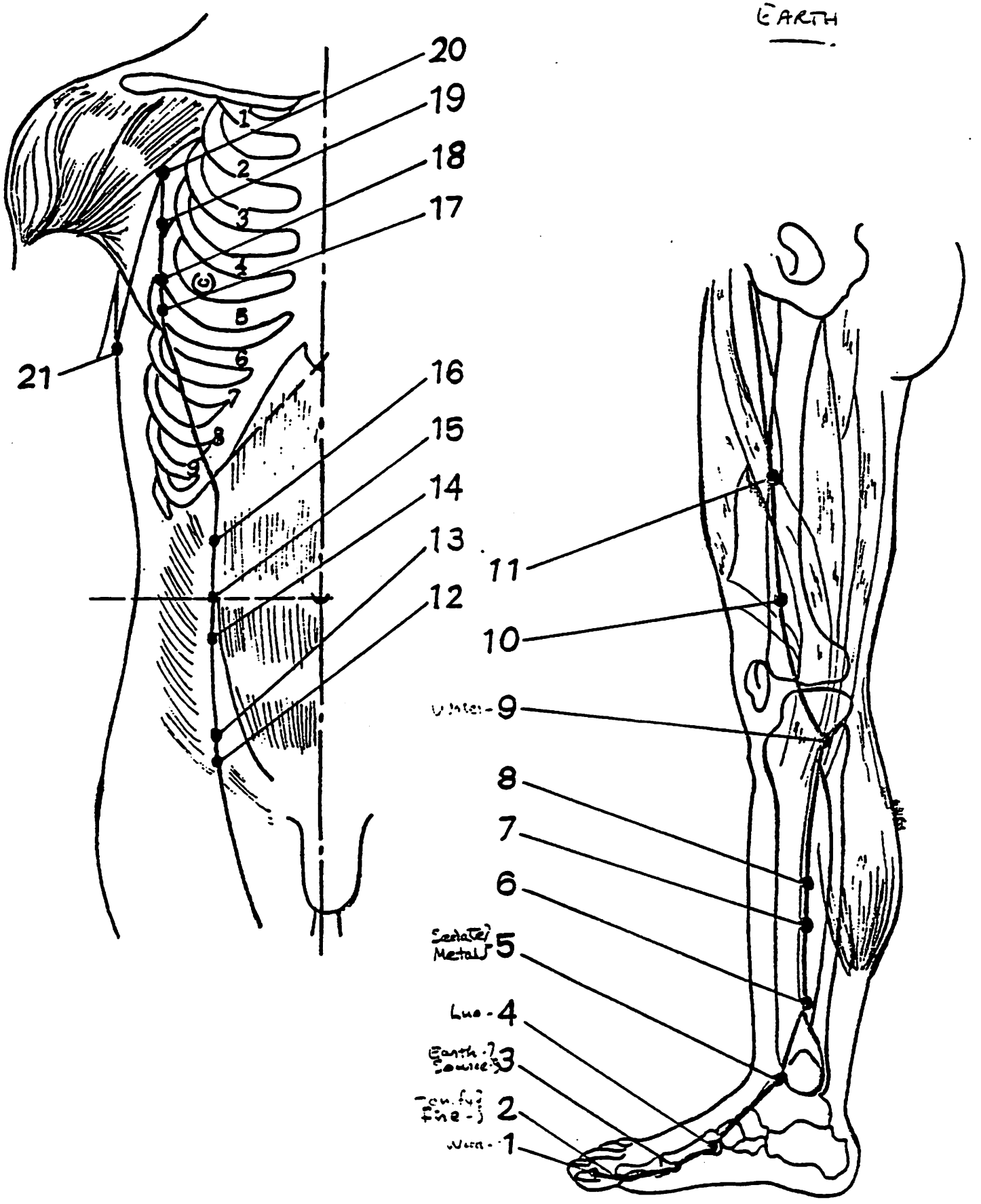
HE
YIN
FIRE


1
2
3 - Water
4 - Metal
5 - Luo
6
7 {sedate source earth
8 - Fire
9 {tonify wood

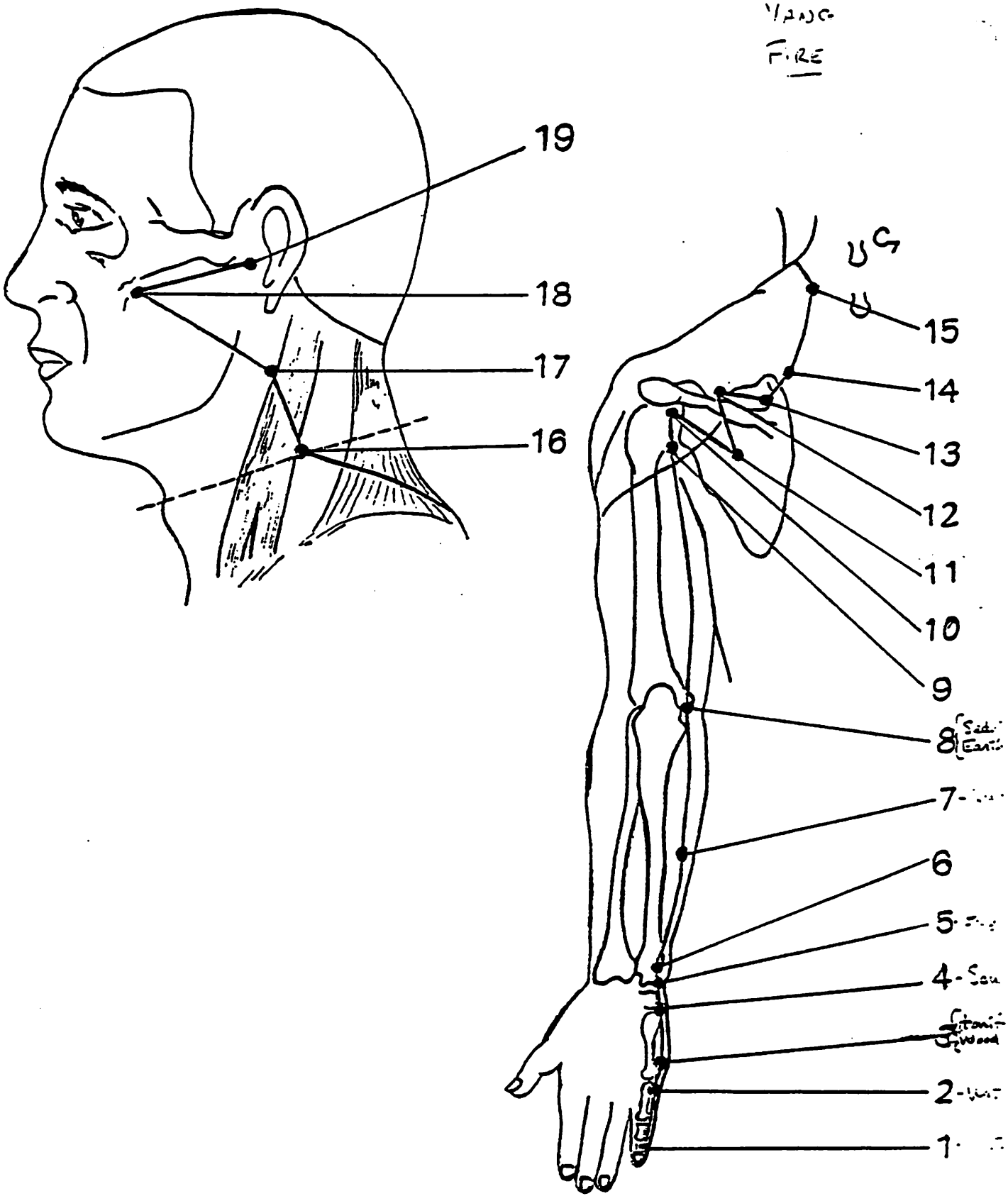
ST
YANG
EARTH



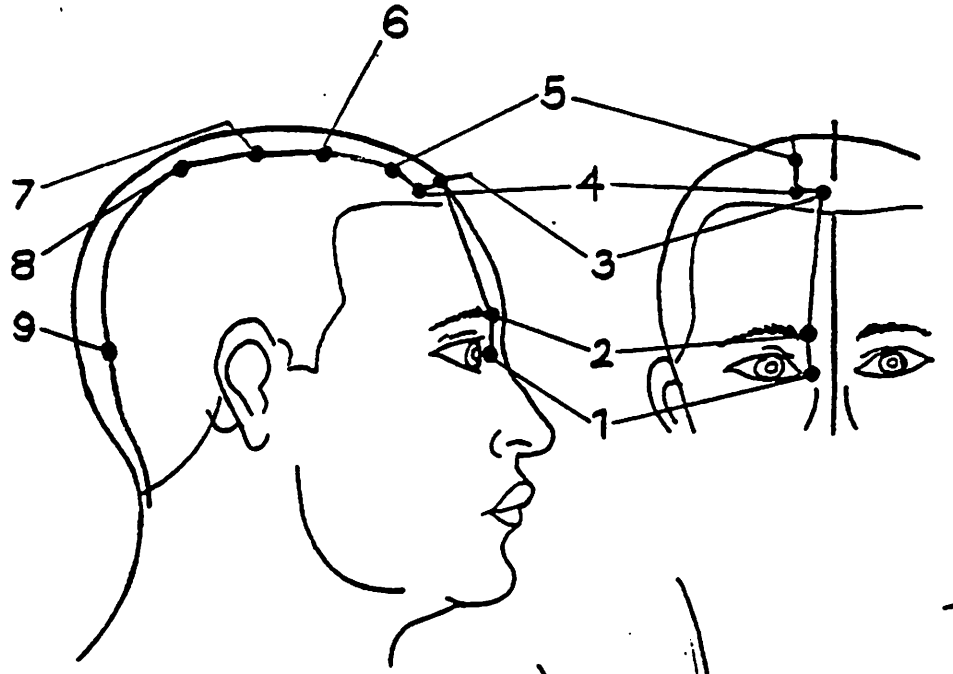
SF
YIN
EARTH

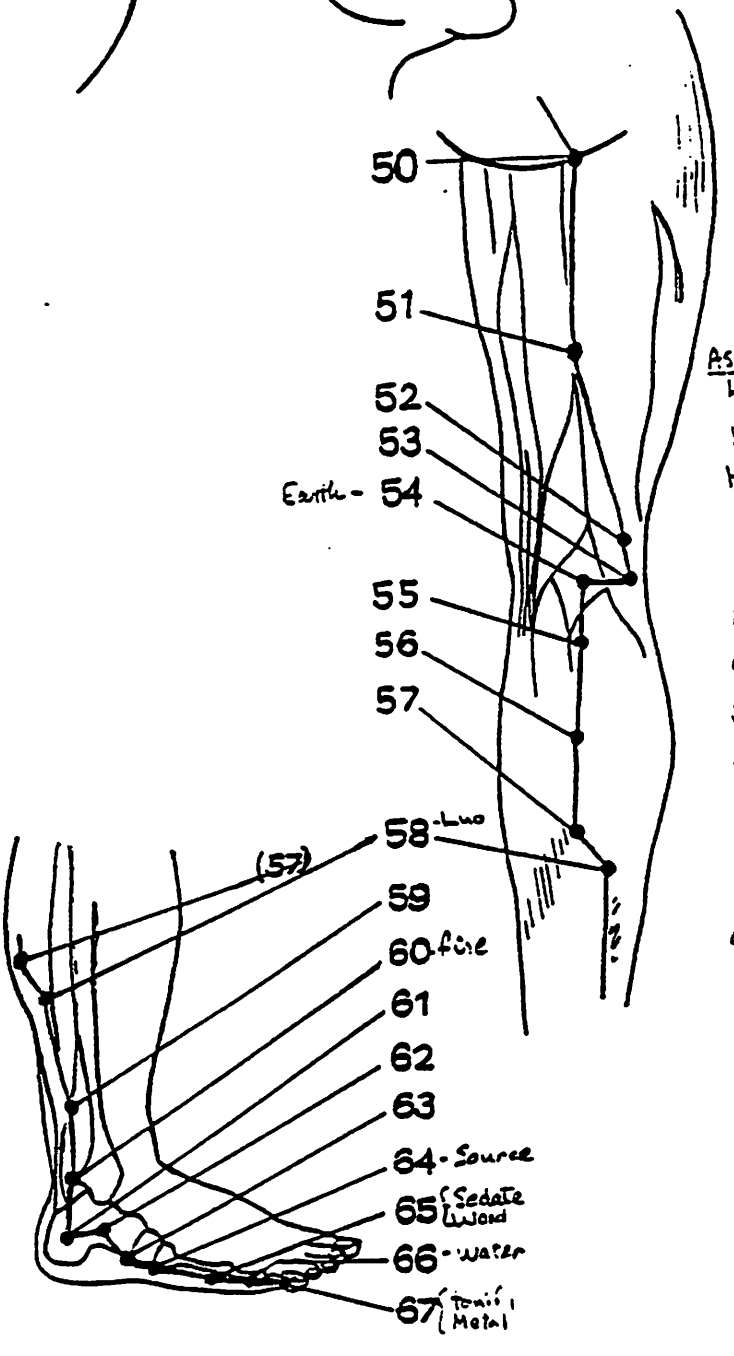


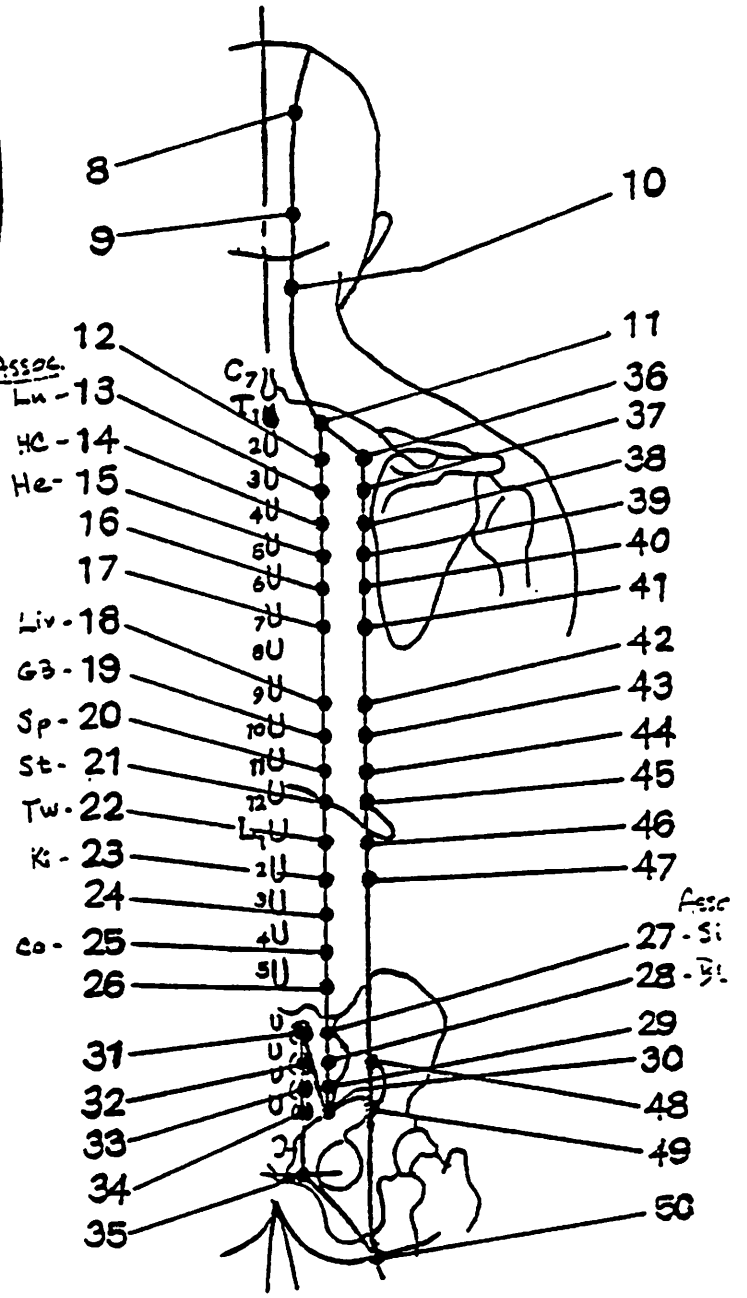
Si
Hand
Fire



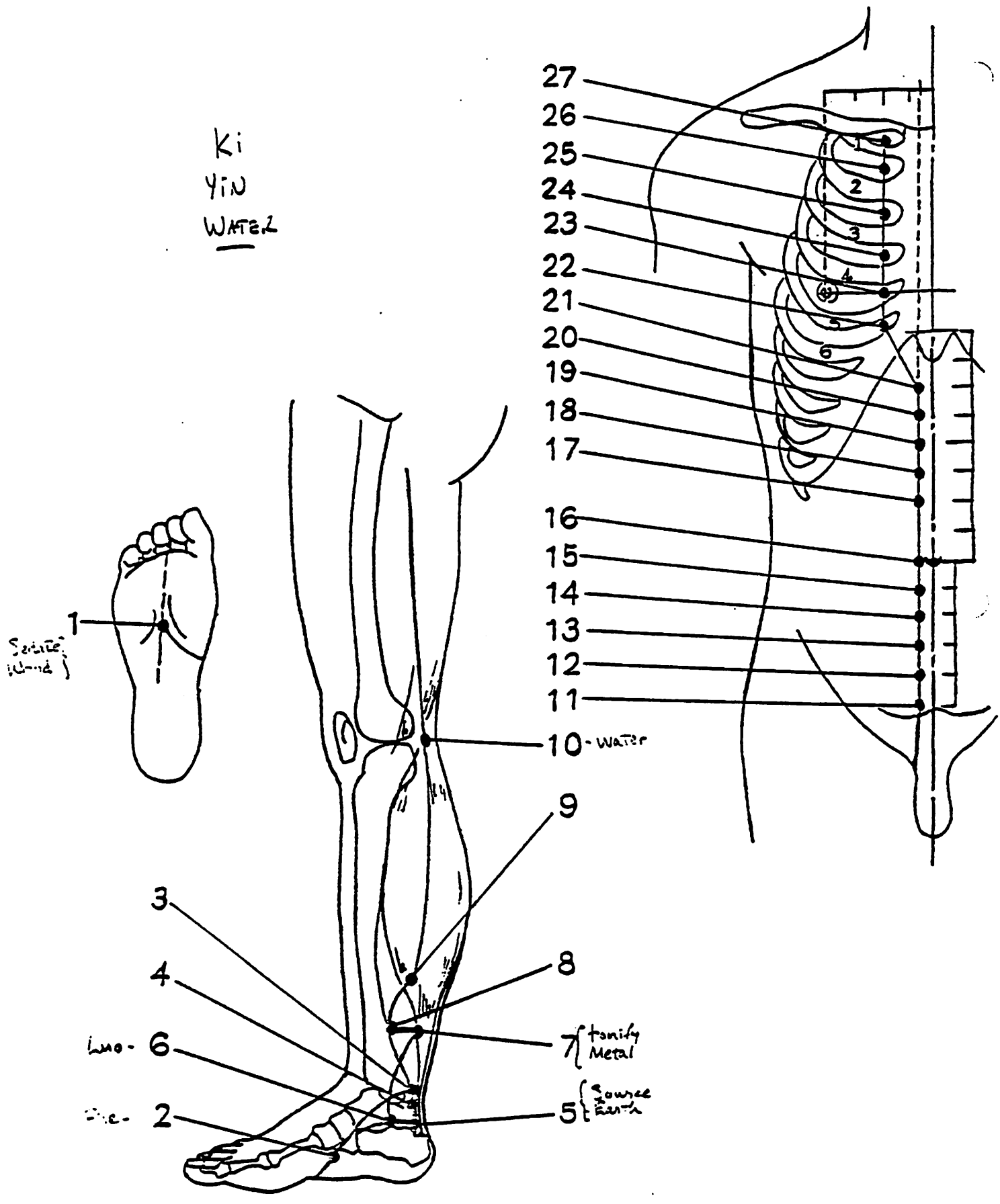
GB
YANG
WATER



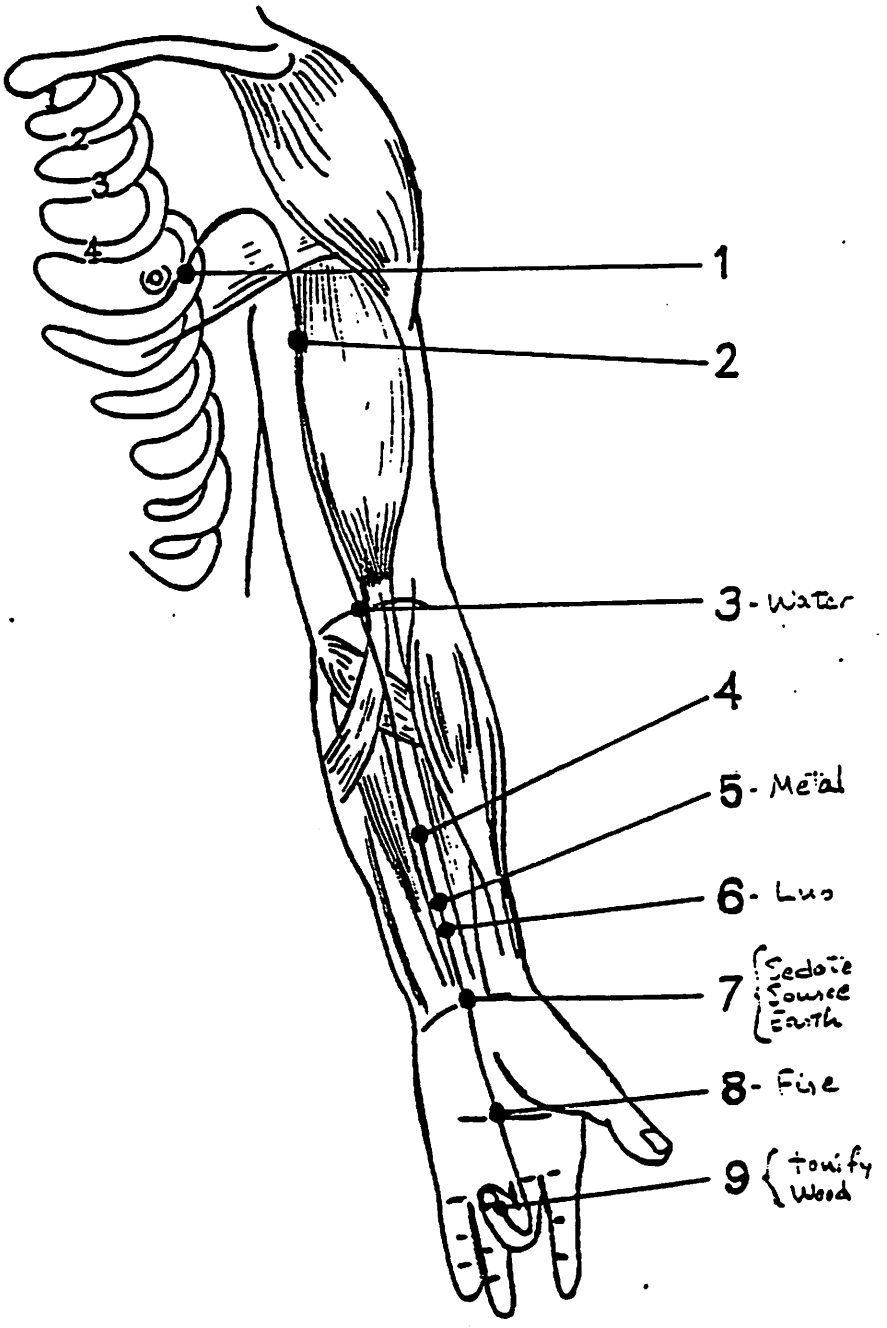


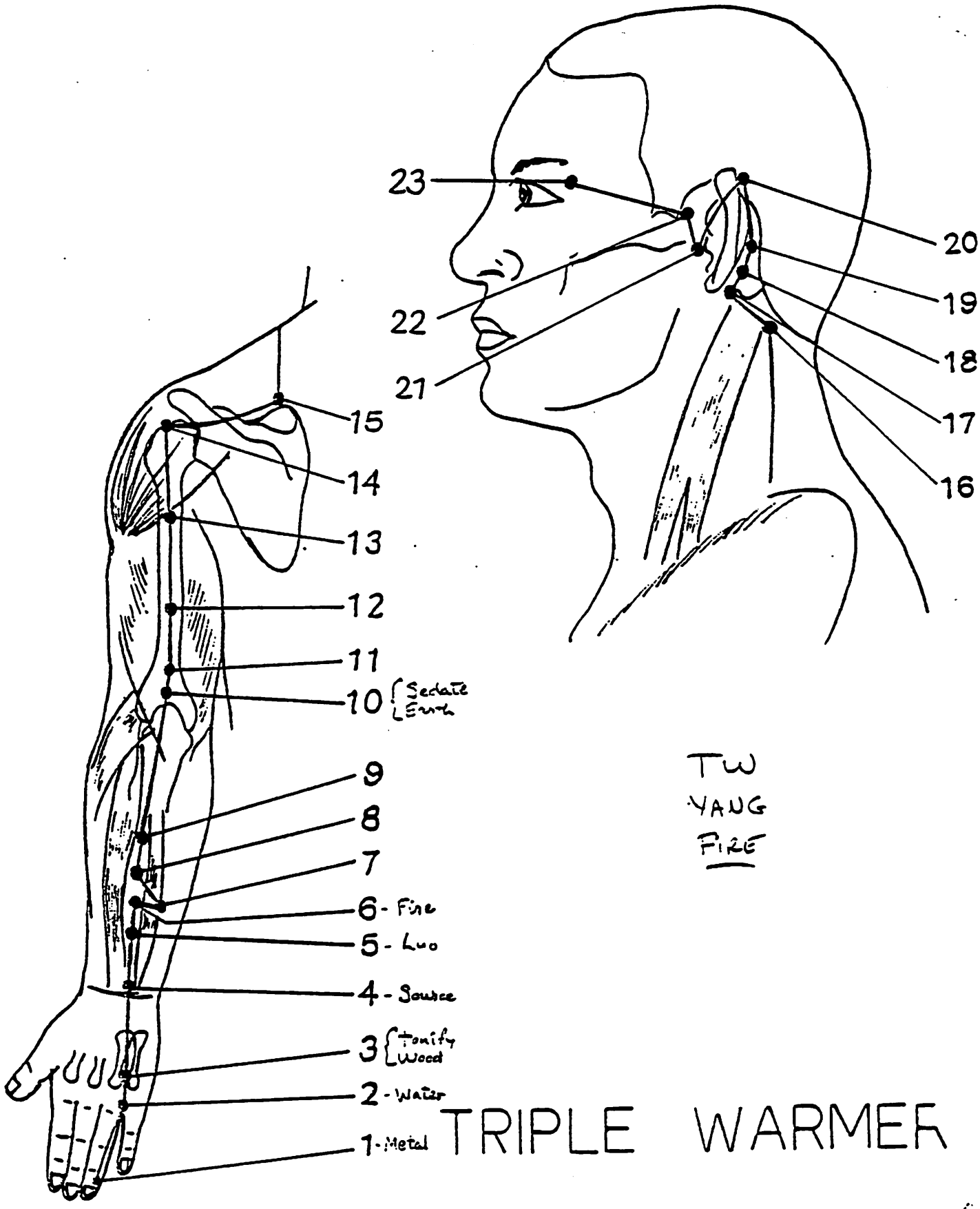


Ki
YIN
WATER

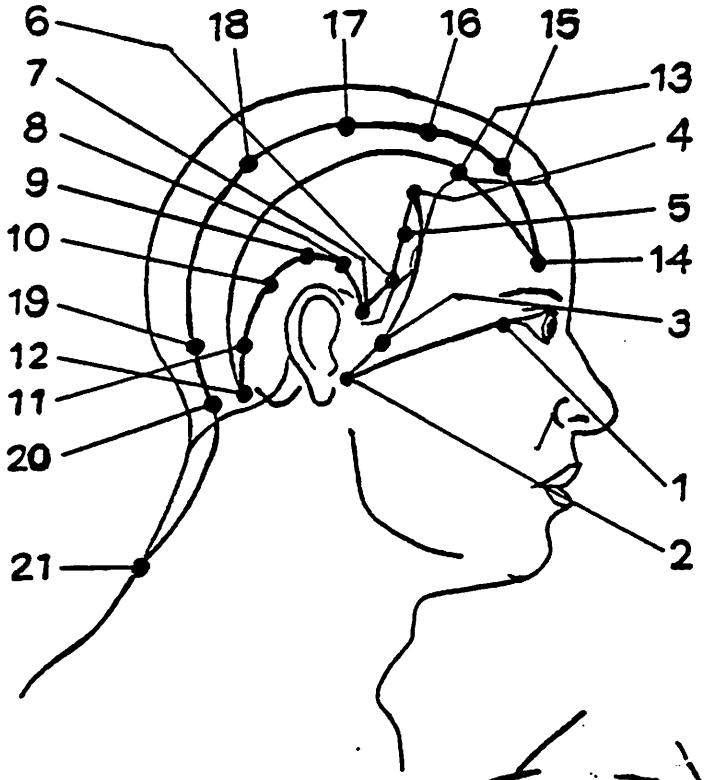

27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10 - WATER
9
8
7 { tonify Metal
5 { source Earth
3
4
6
2
1
2
3
4
5
6

HC
YIN
FIRE

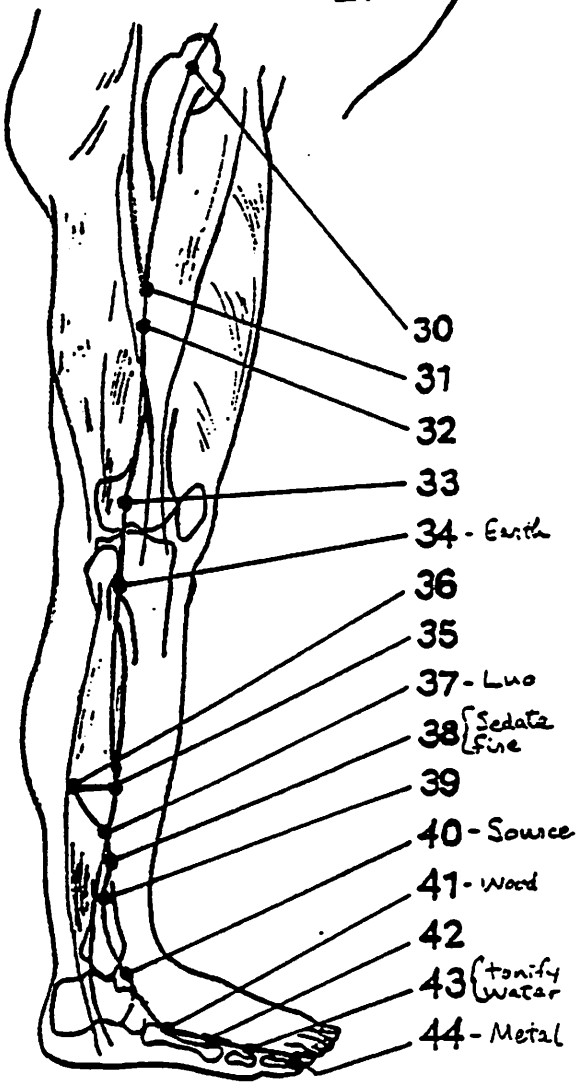

1
2
3
4
1
2
3 - Water
4
5 - Metal
6 - Lung
7 { Sedate Source Earth
8 - Fire
9 { tonify Wood

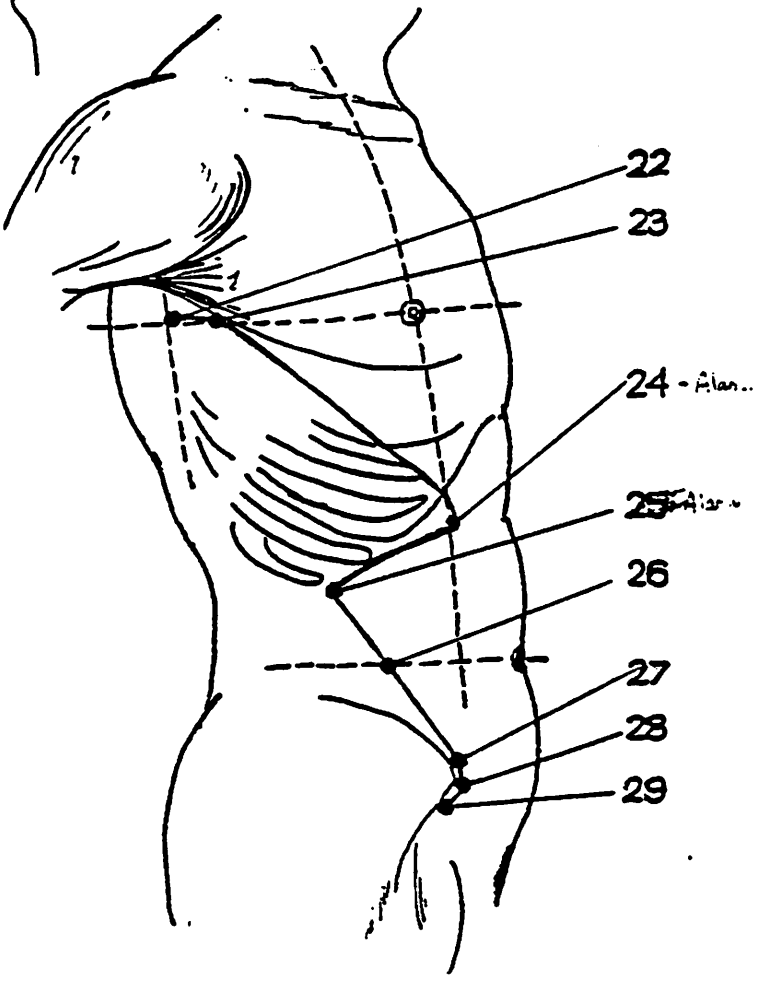


TRIPLE WARMER

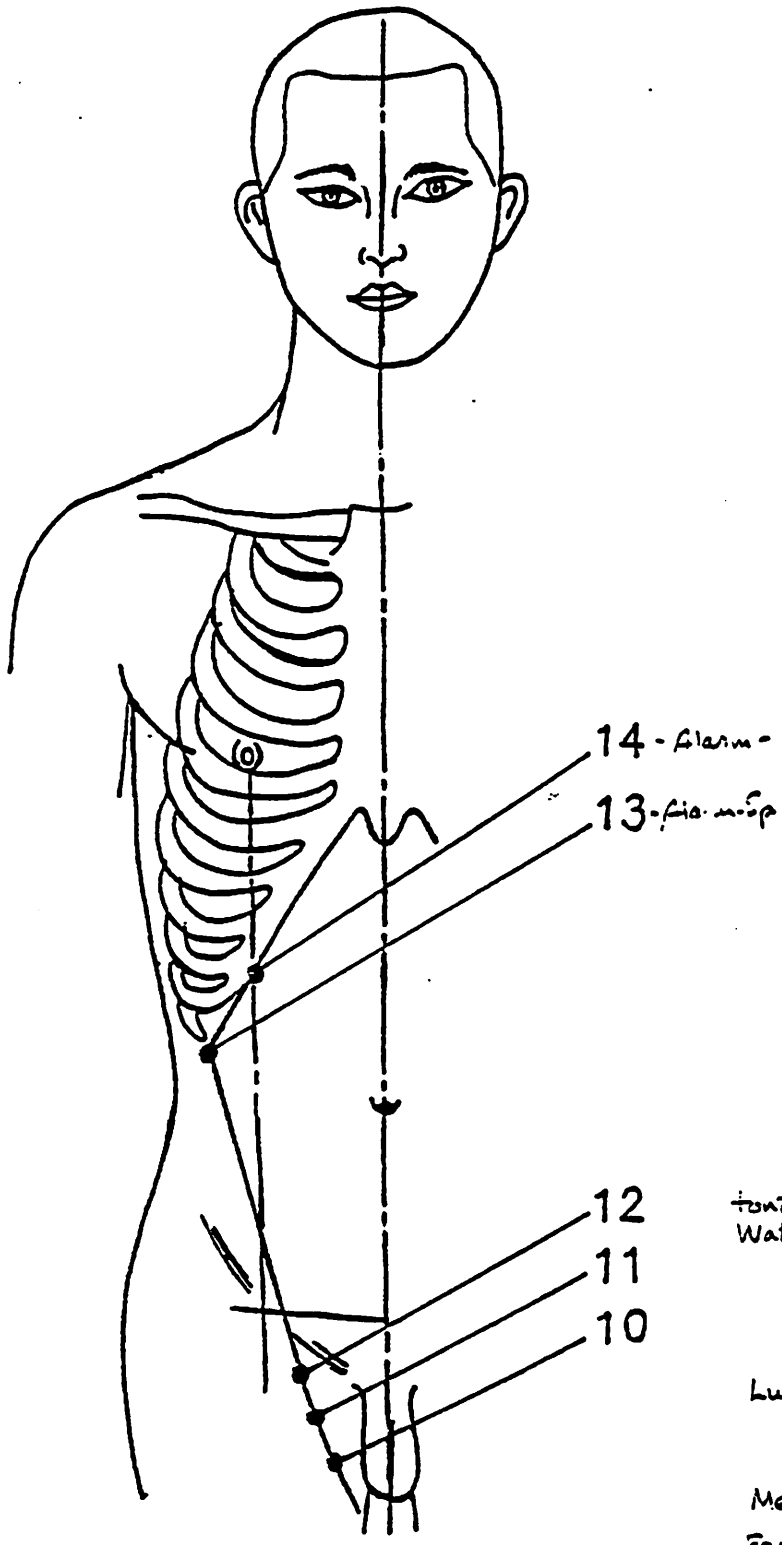

6
18
17
16
15
7
13
8
4
9
5
10
14
19
3
12
11
20
1
2
21

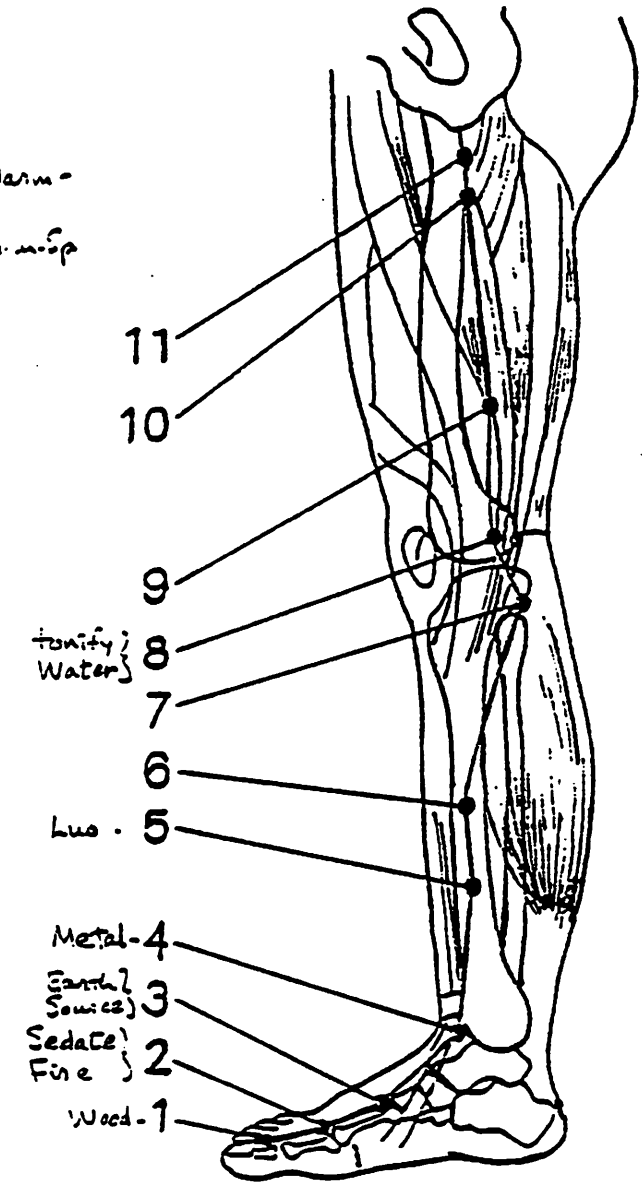
GB
YANG
WOOD

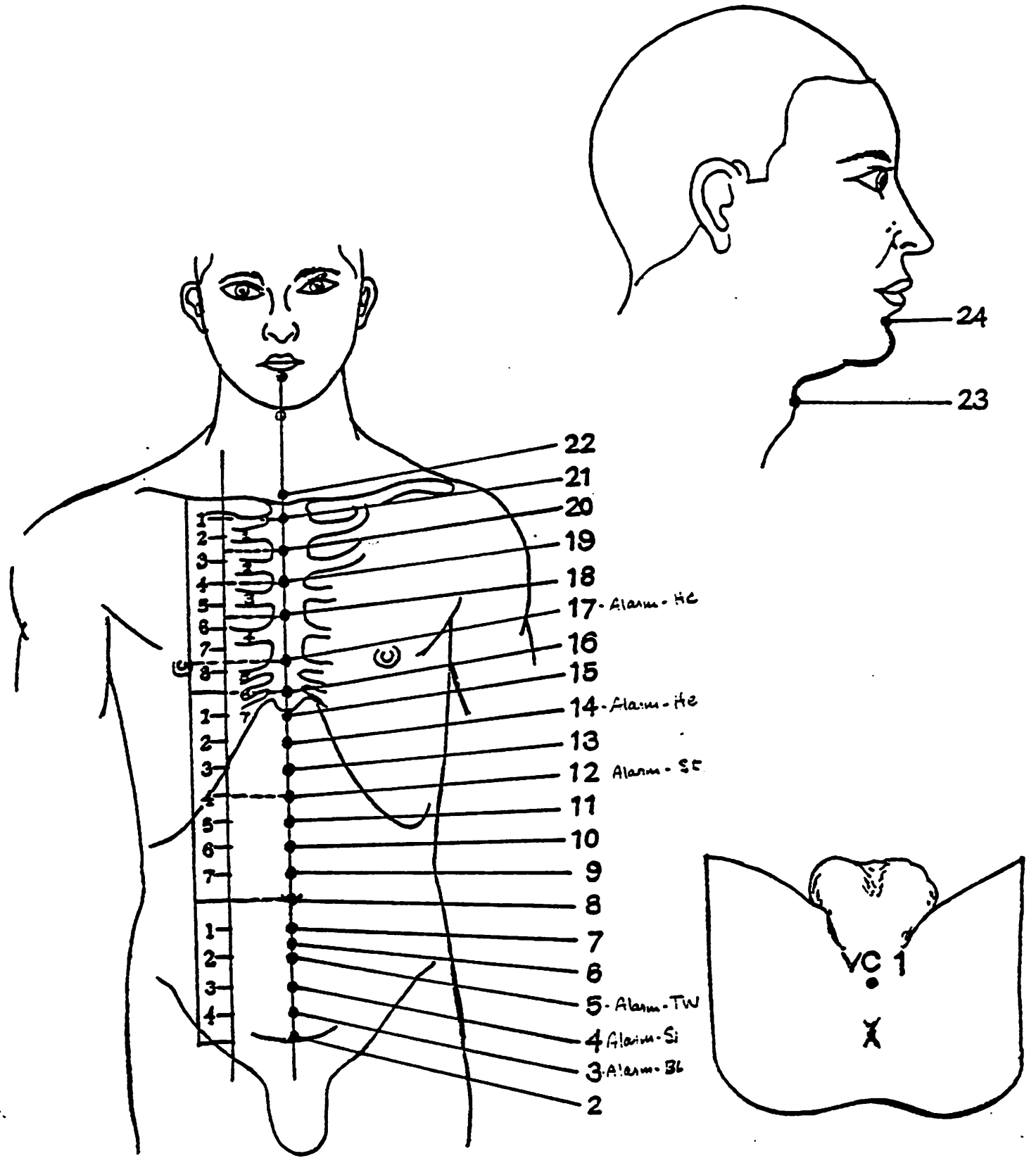

30
31
32
33
34 - Earth
36
35
37 - Luo
38 {Sedate Fire
39
40 - Source
41 - Wood
42
43 {tonify Water
44 - Metal

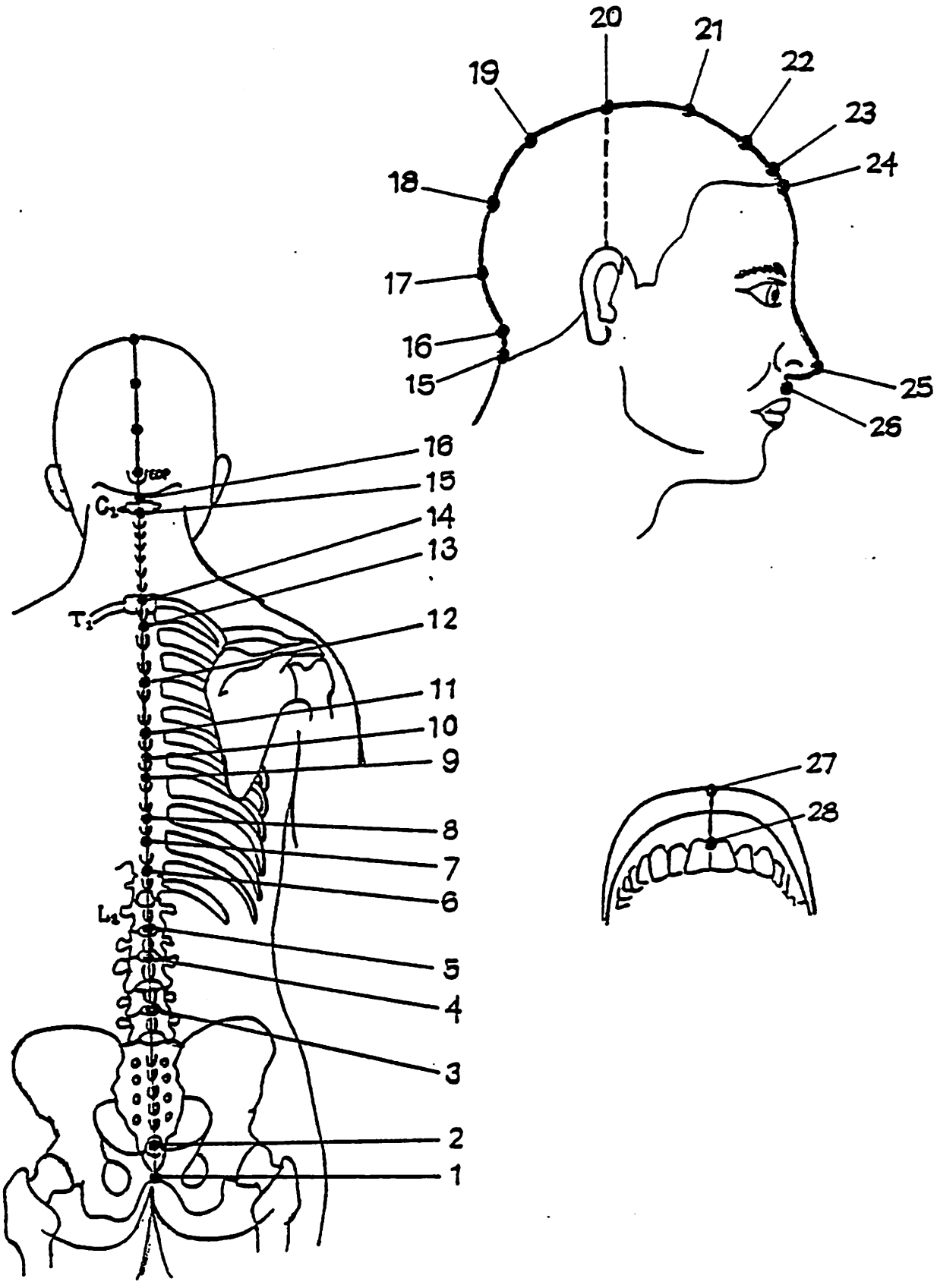

22
23
24 - Alar
25
26
27
28
29

Liv
Yin
Wood

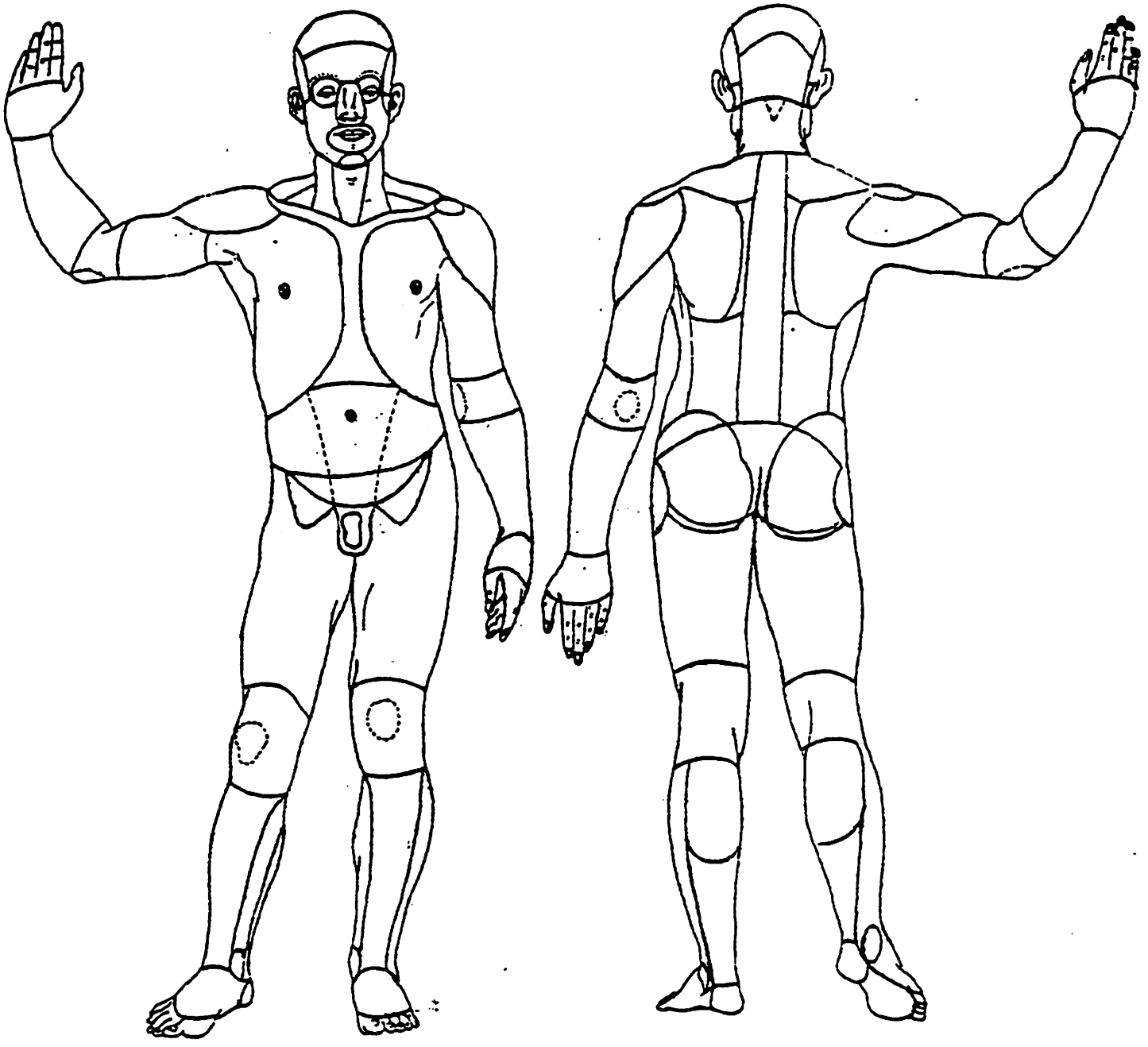

14 - Alarm -
13 - Alarm-Assoc
12
11
10

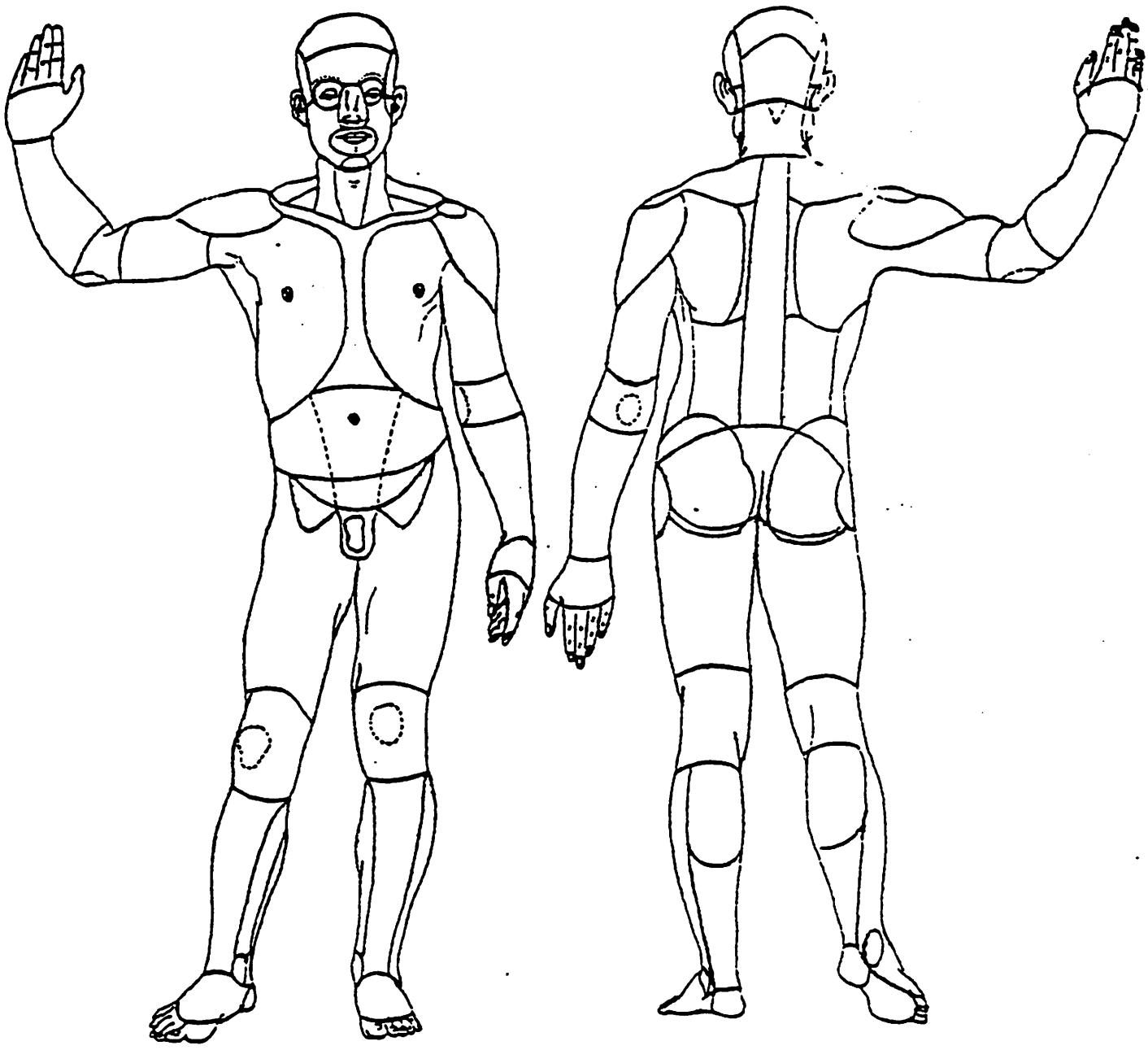

11
10
9
tonify Water 8
7
6
Luo - 5
Metal - 4
Earth Source 3
Sedate Fire 2
Wood - 1


24
23
22
21
20
19
18
17 - Alarm - HC
16
15
14 - Alarm - HE
13
12 Alarm - SE
11
10
9
8
7
6
5 - Alarm - TW
4 Alarm - Si
3 Alarm - BL
2
VC 1

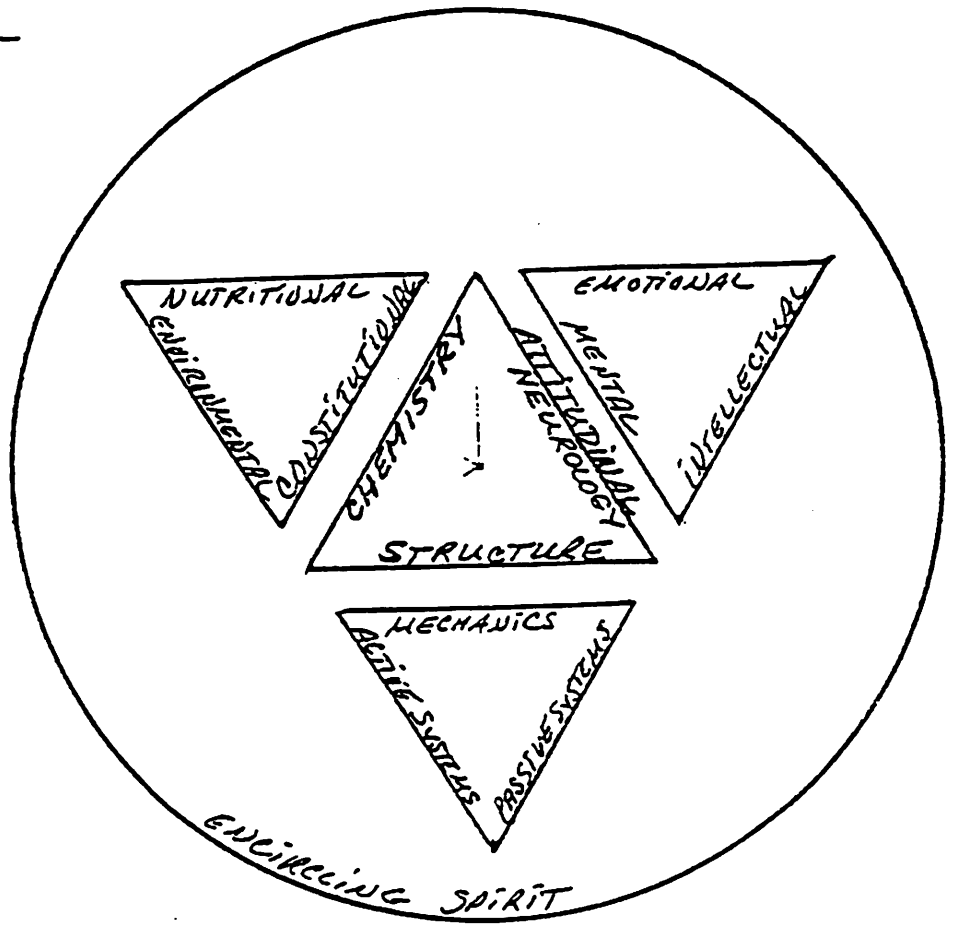

20
21
19
22
23
24
18
17
16
15
25
26
16
15
C2
14
13
T1
12
11
10
9
8
7
6
L4
5
4
3
2
1
27
28

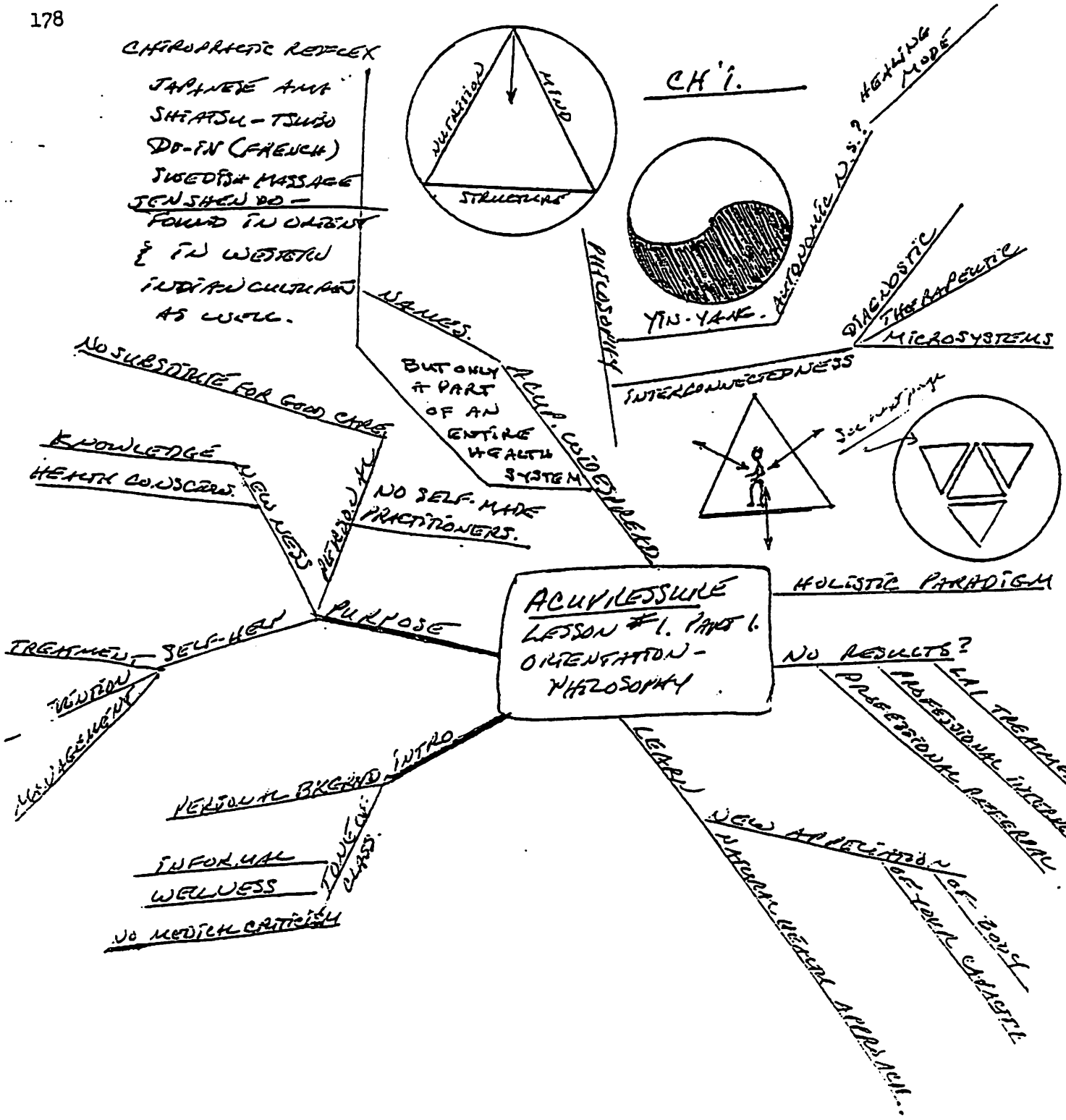
6 of these included





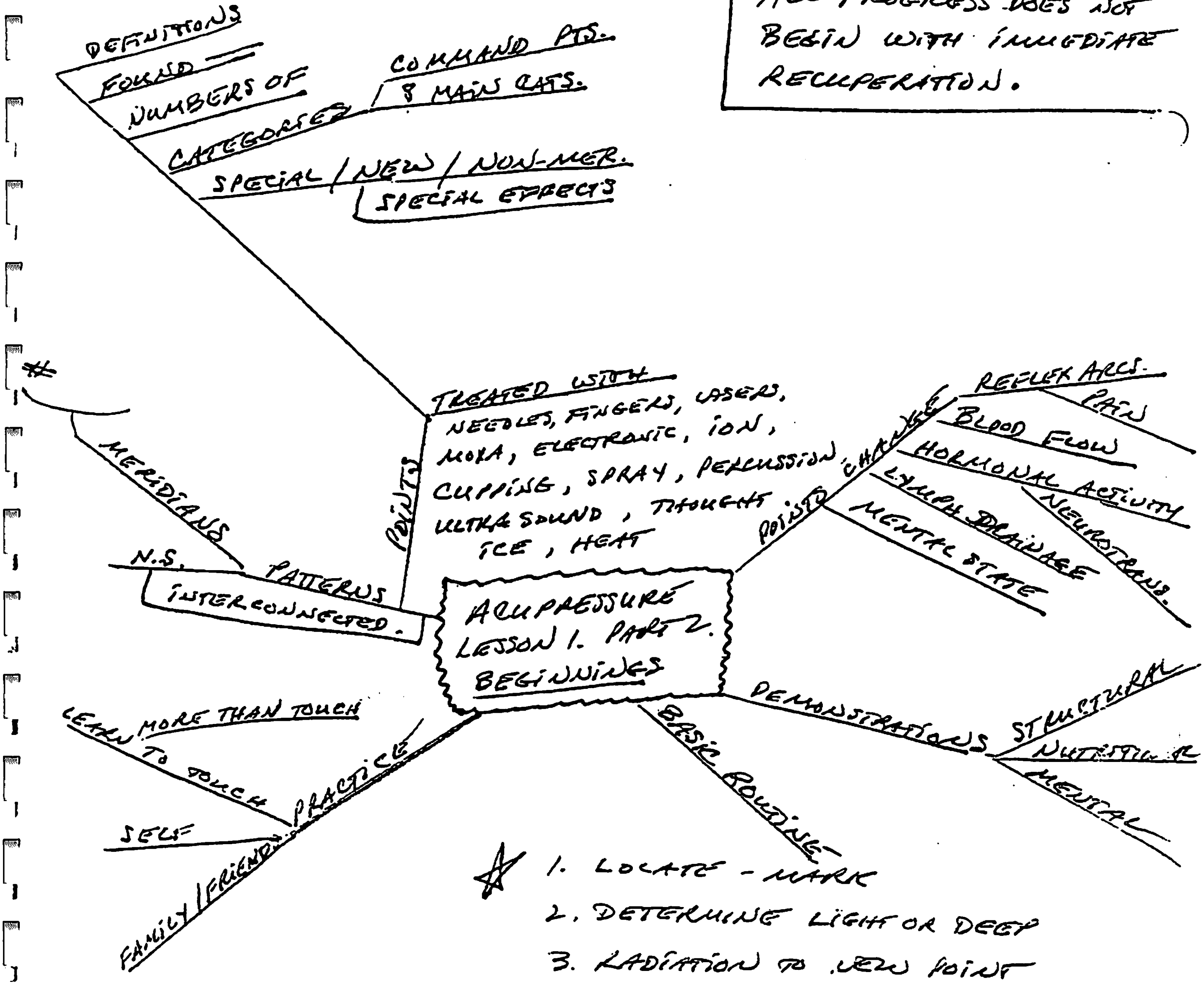
Holistic PARADIGM
IN DIAGRAM





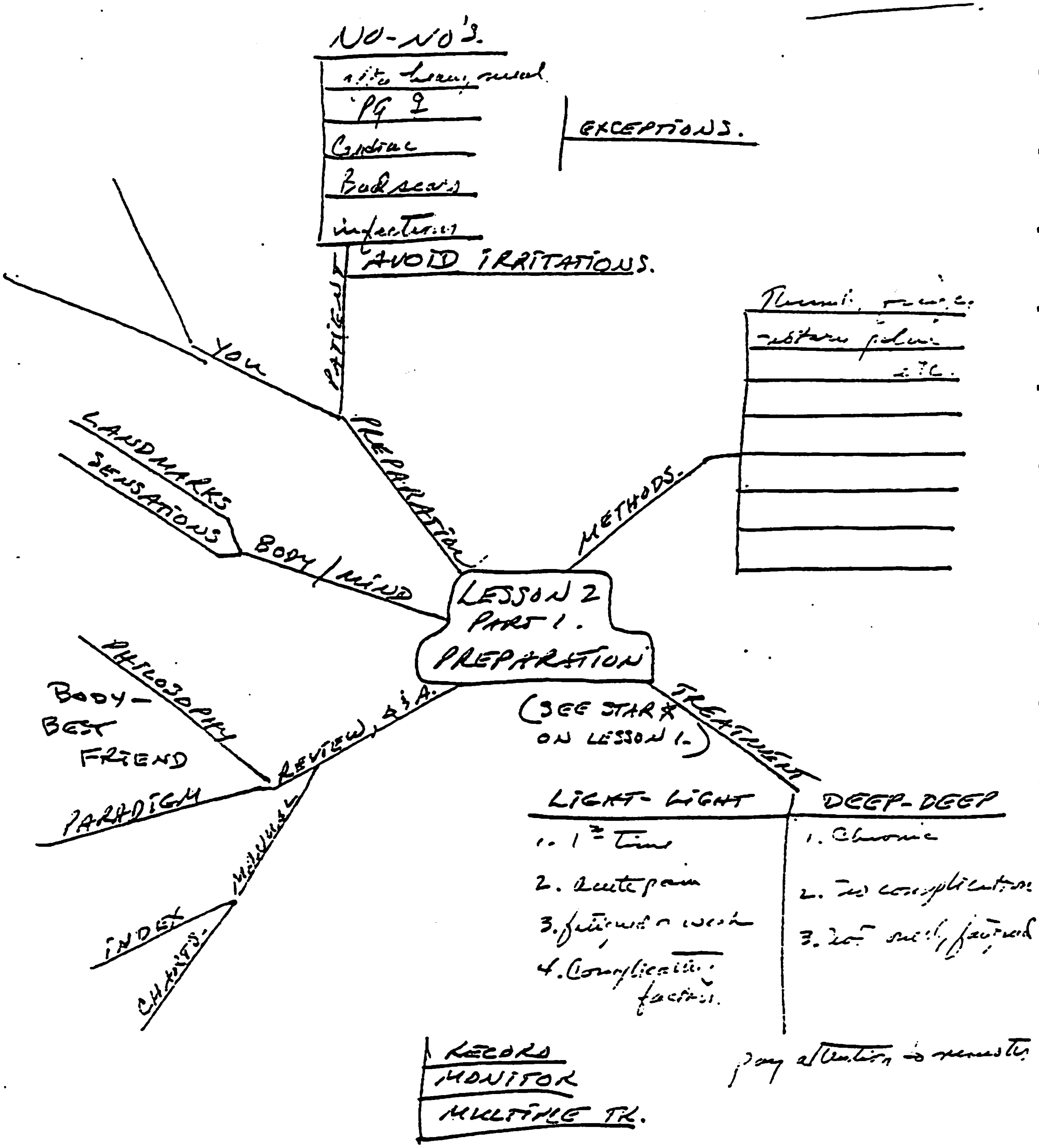
HEALTH IS A JOURNEY — NOT A DESTINATION!

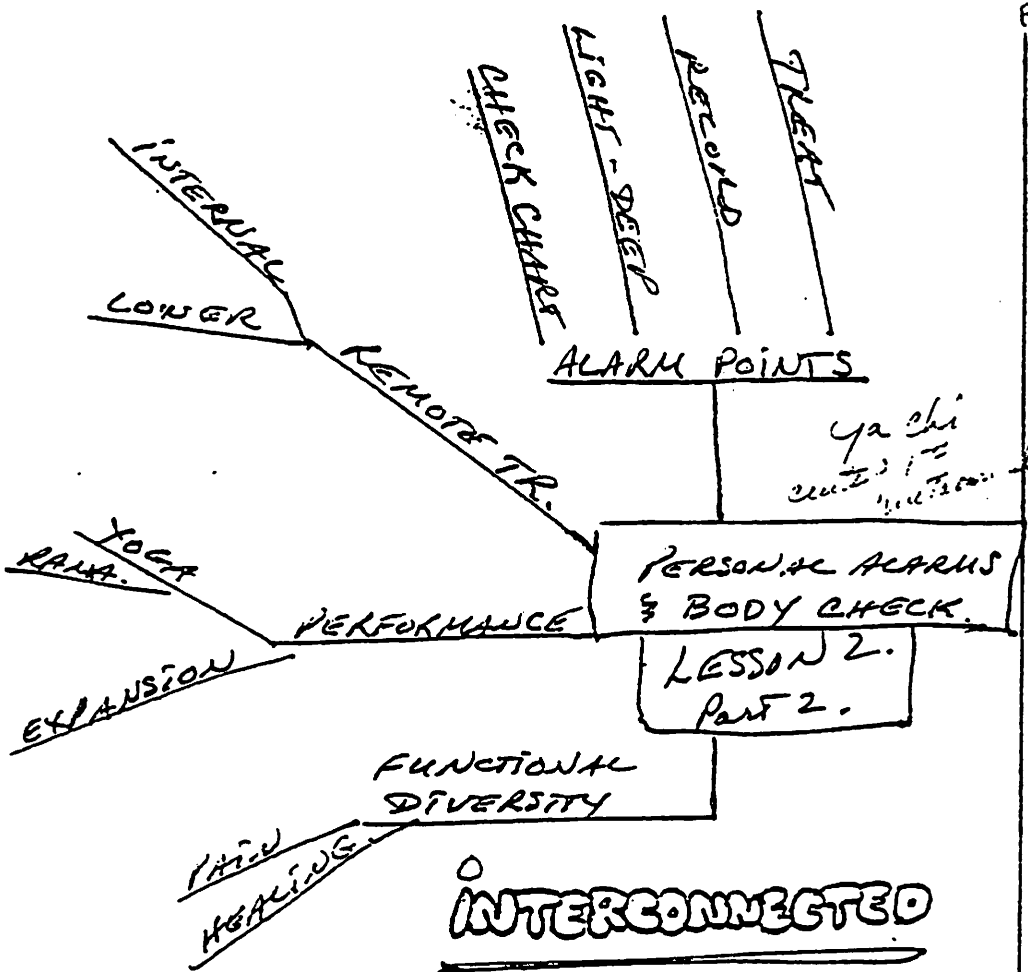
ALL PROGRESS DOES NOT BEGIN WITH IMMEDIATE RECUPERATION.



1. LOCATE - MARK
2. DETERMINE LIGHT OR DEEP
3. RADIATION TO NEW POINT
4. TREAT — 5-15 SECONDS
   DON'T OVERTREAT!

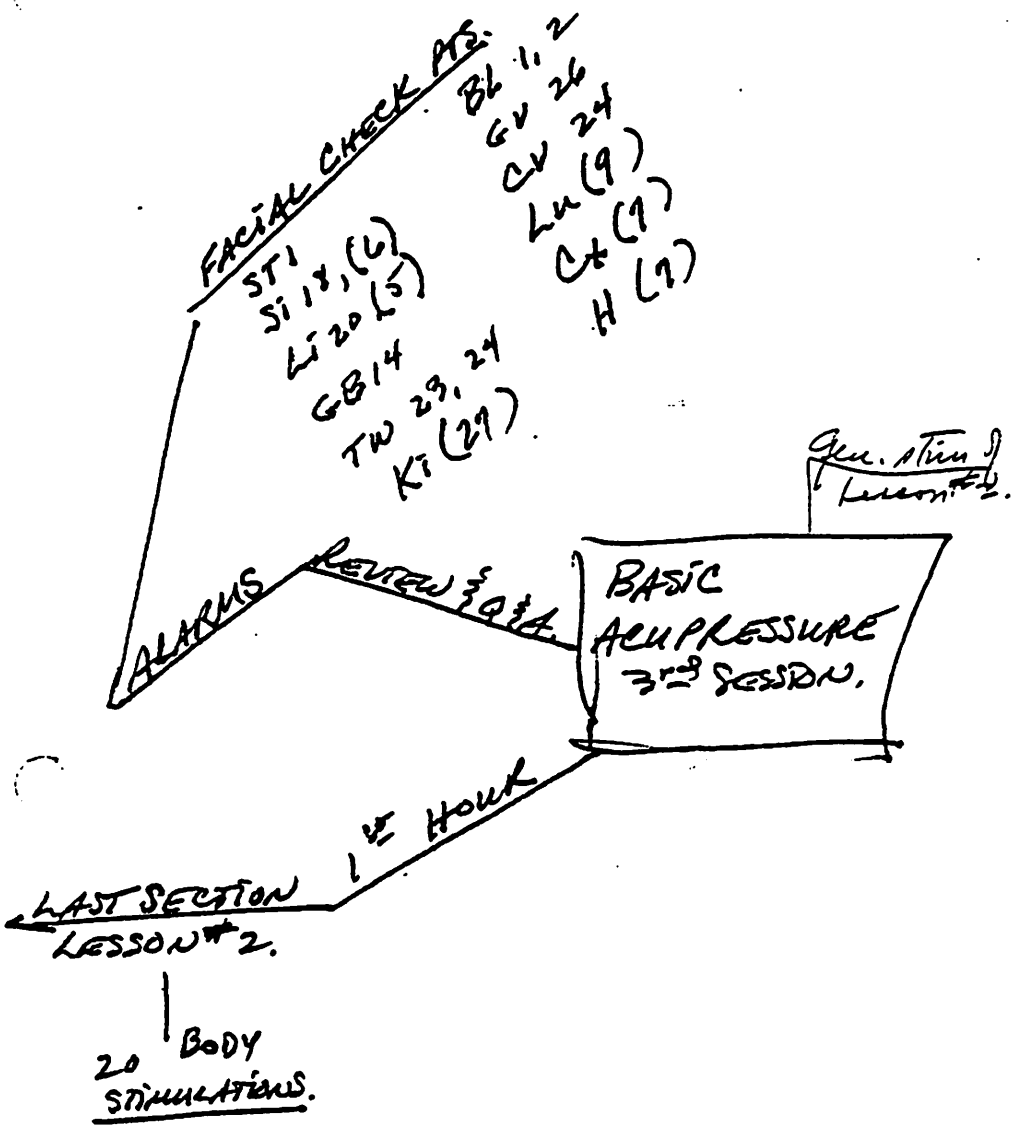
"THERE IS MORE TO LEARN THAN [illegible]"


NO-NO'S.
EXCEPTIONS.
AVOID IRRITATIONS.
PATIENT
YOU
PREPARATION
METHODS.
LANDMARKS
SENSATIONS
BODY / MIND
LESSON 2
PART 1.
PREPARATION
PHILOSOPHY
BODY-
BEST
FRIEND
PARADIGM
REVIEW, Q&A.
TREATMENT
(SEE STAR
ON LESSON 1.)
LIGHT-LIGHT
DEEP-DEEP
INDEX
CHARTS.
RECORD
MONITOR
MULTIPLE TX.

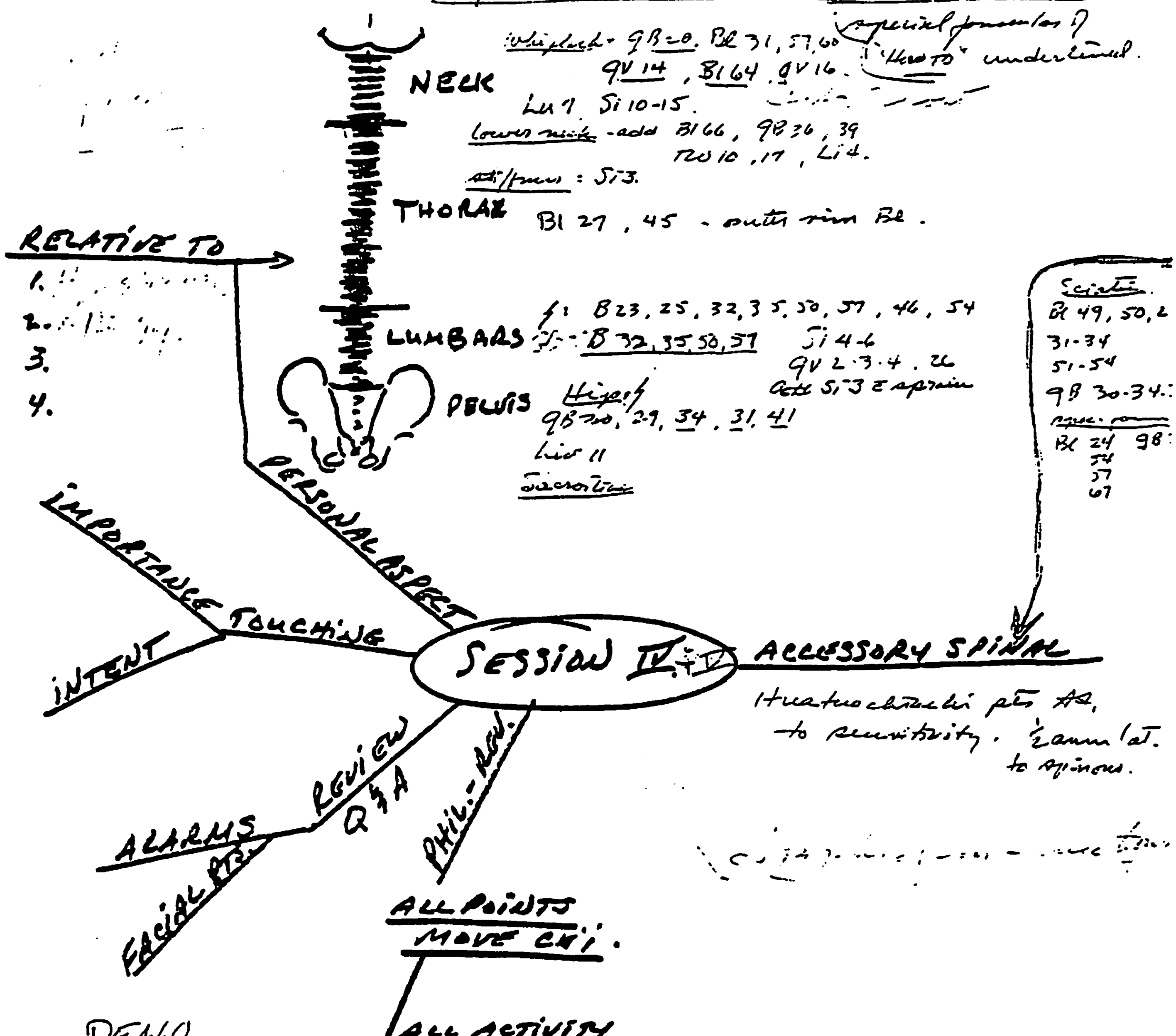


GENERAL FUNCTION STIM.

1. Knock teeth.
2. Clean mouth
stretching cheeks
3. Rubbing hands
4. touching face
5. Massage orbital ridge
6. Tai yang
7. Wiping forehead
Pressing head
8. Vibrate ears -
9. post-auricular knocking
10. slapping chest
11. Rubbing diaphragm - abdomen - clockwise etc.
12. Back
13. Thumping spine
14. [illegible]
15. [illegible]
16. Ki 1 Yong chuan (points)
17. respiration
18. facial pts.
19.
20.

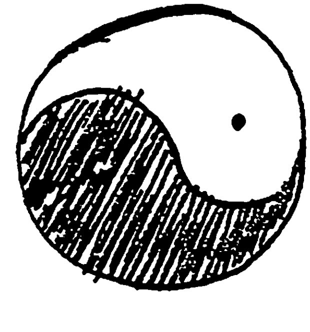

FACIAL CHECK PTS.
Bl 1, 2
GV 26
CV 24
Lu (9)
Ct (7)
H (7)
ST 1
Si 18, (6)
Li 20 (5)
GB 14
TW 23, 24
Ki (27)
Gen. Stim. of Lesson #2.
ALARMS
REVIEW & Q&A.
BASIC ACUPRESSURE 3rd SESSION.
1st HOUR
LAST SECTION LESSON #2.
BODY
20 STIMULATIONS.

Try to treat no more than 6 at a time.



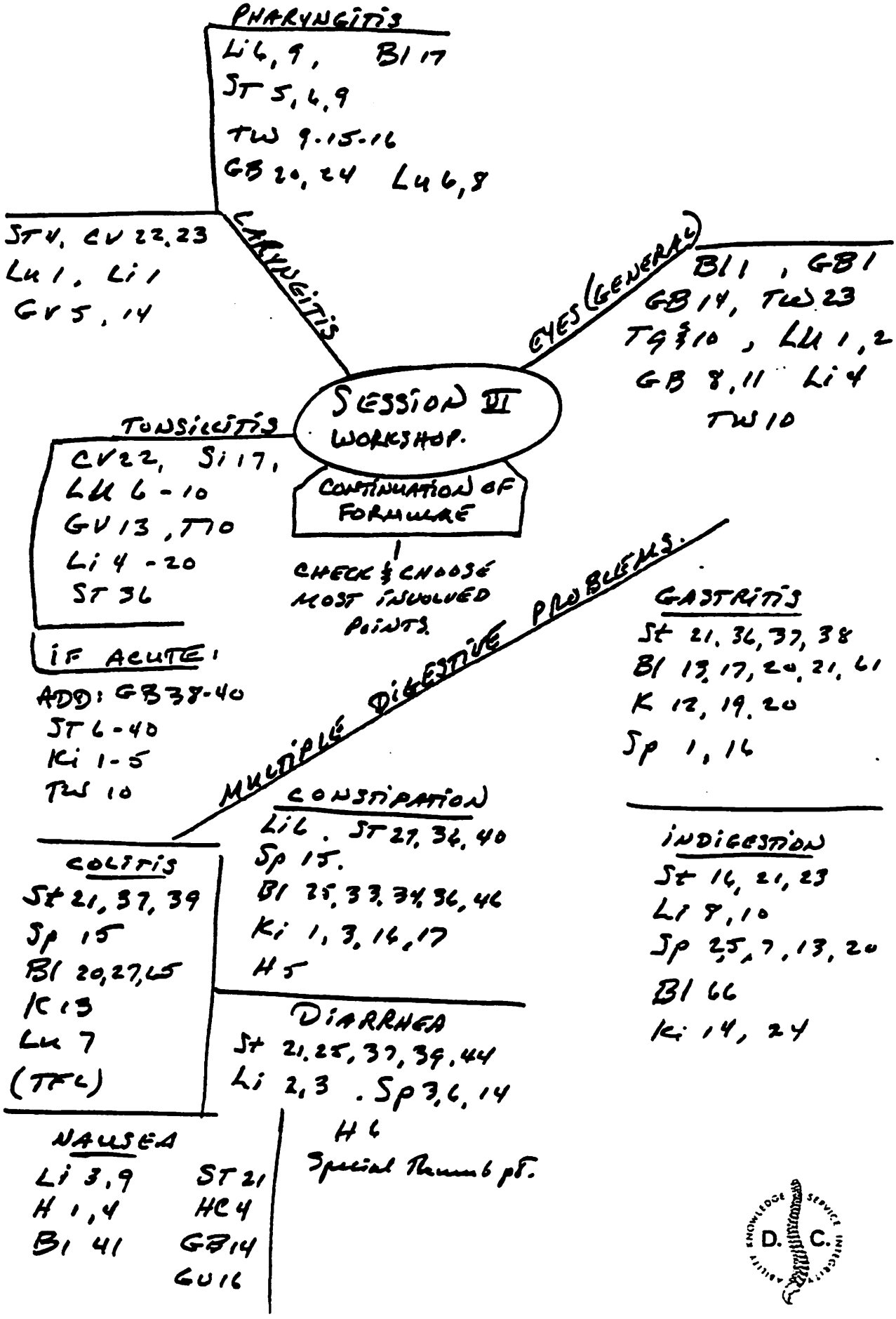
Huatuo chiachi pts AS, to sensitivity. ½ cun lat. to spinous.

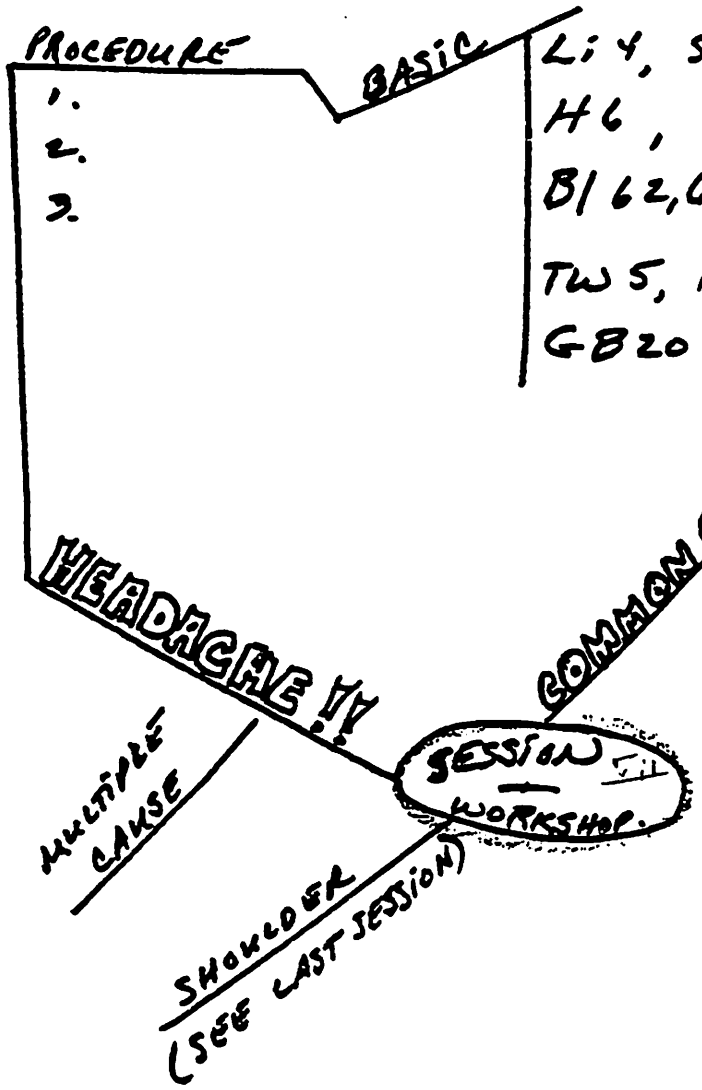
DEMO
Derma-press
needles.
cups
press-pins
fire
spray & stretch



Shoulder. Li 15 ~~S~~ Si 9
Bl 2 Li 11

St 39
Bl 57
Li 5, 11, 16
Si 10, 11 (bursitis)
GB 34
TW 14.


PHARYNGITIS
Li 4, 9, Bl 17
St 5, 4, 9
TW 9.15.16
GB 20, 24 Lu 6, 8
LARYNGITIS
St V, CV 22, 23
Lu 1, Li 1
GV 5, 14
EYES (GENERAL)
Bl 1, GB 1
GB 14, TW 23
TW 8 10, Lu 1, 2
GB 8, 11 Li 4
TW 10
SESSION II
WORKSHOP.
CONTINUATION OF FORMULAE
CHECK & CHOOSE MOST INVOLVED POINTS
TONSILLITIS
CV 22, Si 17,
Lu 6-10
GV 13, TW 10
Li 4-20
St 36
IF ACUTE:
ADD: GB 38-40
St 6-40
Ki 1-5
TW 10
MULTIPLE DIGESTIVE PROBLEMS.
GASTRITIS
St 21, 36, 37, 38
Bl 13, 17, 20, 21, 61
K 12, 19, 20
Sp 1, 16
INDIGESTION
St 16, 21, 23
Li 8, 10
Sp 2, 5, 7, 13, 20
Bl 66
Ki 14, 24
CONSTIPATION
Li 6. St 27, 36, 40
Sp 15.
Bl 25, 33, 34, 36, 46
Ki 1, 3, 16, 17
H 5
COLITIS
St 21, 37, 39
Sp 15
Bl 20, 27, 45
K 13
Lu 7
(TFC)
DIARRHEA
St 21, 25, 37, 39, 44
Li 2, 3. Sp 3, 6, 14
H 6
Special Thumb pt.
NAUSEA
Li 3, 9
H 1, 4
Bl 41
St 21
HC 4
GB 14
GV 16



BASIC

Li 4. ST 36
GV 14
Bl 12, 13
GB 21, 24,
Sp 16
TW 17, GV 22
Li 16, 20

ADD-ONS.

FACIAL PAIN. H3
FEVER Li 11
COUGH CV 22
HEADACHE, STUFFY NOSE
GV 16, B1 2, GV 23
TW 5
TOOTH PAIN GB 20, Li 4
Liv 2, TW 3
CONSTANT HEADACHE
B1 7, 18, T23, ST 36

HYPERTENSION

Li 11, 17, 18 ST 36
SI 10, BL 11, 15 . GB 20.

ST 9, 30, Sp 4, 6, He 7, BL 2, Ki 1, 2
HC 7, 8 GB 27. GV 16, 20, 32. Lu 9

2" lat to spinous of CL.

Hypotension groove.

BL 54, KI, TS, GV 16 HGP. Solar plexus.
Co 15. HC 9, Liv 13 CV 9.

CARDIAC ARRHYTHMIAS HC 6 - HC 7
STOM. ULCERS ST 36 - 25, CV 13

DYSMENORRHEA
H 5, S 24, 25, 44
Liv 8, 13, 14.
CV 4-6
Sp 9, 10, 12
BL 23, 31, 17, 62.
GV 12
CV 6

VIII

ASSOC. PTS.

Lu - BL 13
HC - BL 14 (circulation)
He - BL 15
Liv - BL 18
GB - BL 19
Sp - BL 20
ST - BL 21
TW - BL 22
Ki - BL 23
Co - BL 25
SI - BL 27
Bl - BL 28

MISC. ORGAN TROUBLES

USE SOURCE POINT PLUS ALARM OR ASSOCIATED PT., WHICHEVER IS MORE TENDER.

SOURCE PTS.

Lu 9	BL 64
Co 4	Ki 5
ST 42	HC 7
Sp 3	TW 4
He 7	GB 40
SI 4	Liv 3

(OVER)

NEW (EXTRA-MERIDIAN) - POINTS.

AFTER JAMES CHEN, M.D.

AM. J. ACUP. Vol 4. #3 1976.

1. SHANG-HOKU. 1 body inch above LI 4 on LI Meridian.
toothache pain & nose pain.

2. Whole headache point - dorsum of hand, ulnar side of MCP joint of Thumb.
Whole head cephalgia. vertigo, abdominal distention.

3. Yatungtien. palmar surface between distal ends of 3rd & 4th metacarpals.
- toothache.

4. Sprain point. upper 1/4 forearm between elbow & wrist of 90° bent forearm.
— acute low back pain.

5. Chienming: 1/2 body inch lateral (post) to deltoid insertion OR 1/2 body inch superior & lateral to LI 14
- eye disorders & upper extremity paralysis.

6. Bare Doctor Principal point. Midline spine just above tip of spinous of T6.
'Great variety of disorders'.

7. Naoching. 'Brain clearing'. 2 body inches above ST 41. Narcolepsy, memory, vertigo, foot drop.

8. Stop diarrhea/water retention - 2.5 body inch below CV 8. \ abdominal pain.

An additional means of determining the necessity for nutritional supplementation

by Marc S. Rosen, D.C.

Abstract: The academics of occipital fiber analysis where discussed in a previous paper published in the Collected Papers winter 1981. Therapy localization of an occipital fiber offers an additional (sometimes alternate) means of evaluating the sixth factor of the I.V.F. . I refer to nutrition. The nutritional factor may be required for the resolution of the functional problem that precipitated the defensive formation of the fiber in question.

The occipital fiber, being a structural indicator, does lend itself to an examination via therapy localization. That therapy localization being positive when the fibers associated cervical, thoracic, lumbar and sacral segments and their meningeal, visceral, or pathological components are involved either functionally or pathologically. It is the viscero-somatic formation of an occipital line two nodule that may aid in determining what supplements are indicated for a patient.

Functional hypoadrenia, hypoglycemia, hypothyroidism, colon and liver dysfunction are certainly a rule and not an exception with the patients that present in our office's. The list of symptoms that characterize these functional health problems seems endless. When we approach these problems from an Applied Kinesiological point of view, at least one third of our therapeutic effort would involve the chemical side of our symbolic triangle. The chemical element of a functional health problem is largely managed through the oral administration of various nutritional/

food supplements. Those supplements may be either glandular, vitamin, mineral, homeopathic, herbal or combinations thereof.

The dietary habits of the patient are certainly a chemical consideration. However, we usually do not test for the specifics of dietary change. Natural food programs are instituted that apply, in a broad sense, to most health problems. Health problems that are both functional and pathological. In contrast, nutritional supplements are routinely tested for by having the patient taste the supplement then monitoring the strength of an indicator muscle. Fortunately this approach has lent a great deal of objectivity to an otherwise empirical procedure.

Therefore, we would all agree that nutritional supplementation, as a therapy, is a necessity (when that therapy is based on the triad of health).

For any test to be valid it must be artful. Of utmost importance is the isolation of the indicator muscle (Walther chapter 15). I think that almost all of the practitioners using Applied Kinesiology have had occasion to attend patients, whereby the isolation of an important indicator muscle was not possible. As an example, consider a knee joint whose range of motion is limited by trauma or osteoarthritis. In this case the isolation of the sartorius would not be possible. The same two circumstances could limit femoral mobility and prevent an accurate test of the psoas or tensor fascia lata. There are patients who are either excessively strong or weak. There are patients who are unable to follow directions or who are to young or to old to test.

There are many patients who just do not test well. Of course, in these situations, the use of a surrogate is indicated. There are situations where surrogate testing is impractical or impossible. Many doctors have only one C.A. in the office. During the time that she serves as a surrogate her other duties do not cease. The phone may ring, patients have to be directed into the treatment rooms etc. Some patients object to surrogate testing in that it does carry an air of the metaphysical. We often choose as surrogates the parents of a pediatric patient. Many times parents are themselves patients or have attended Touch for Health classes. This becomes an open invitation for operator prejudice, as they enter the office convinced that their childs "valve is open".

Should an Applied Kinesiologist be faced with a muscle that he/she can not isolate, with surrogate testing not a possibility. Then what is the next alternative to consider? The text that follows deals with that alternative.

The procedure for the testing of nutritional supplements, using an occipital fiber, is as follows; place the patient in a prone position ... select an indicator muscle that is strong in the clear ... palpate the occipital lines ... select a fiber that is nodulated on line two ... have the patient therapy localize that fiber with the index and middle fingers (left hand to the left occiput, right to right) ... if the therapy localization is positive, place the supplement that is to be tested on the patients tounge ... if the tasting of the supplement does

abolish the therapy localization ... then that supplement is indicated for that patient. The first supplement that you would consider would be one that relates to the organ systems associated with the occipital fiber that exhibited a positive therapy localization. As an example, the patient has an occipital seven that is nodulated on line two. Occipital seven line two reflects a noxious viscerosomatic reflex between the reproductive organs and L5 and the adrenal glands and T9. The supplements that you would test for initially, would be those that would support the adrenals and/or the reproductive system. The occipital fibers are a definitive diagnostic aid. They direct your attention to spinal and visceral areas that are "priorities" within the treatment program for that patient. Look for a correlation between the organs systems (associated with the fiber that therapy localizes) and any other clinical data for that patient. In this case, dysmenorhea, impotence, postural vertigo, photophobia, frequent infections etc.

When selecting a supplement to test, the choice is not limited to the nutrition that relates only to the organ systems associated with the fiber. That is an initial consideration but not a final one. There are products that do not have a known muscular association. As long as the tasting of a supplement abolishes a therapy localization by restoring strength to a previcusly strong indicator muscle, then that supplement will benifit that patient.

The therapy localization of an occipital fiber is probably

under cerebellar influence. When testing a variety of supplements be certain that the patient makes and breaks the therapy localization contact before the next tablet is placed on the patients tounge. If the therapy localization is prolonged, then the test may be falsely positive. As it was the cerebellum that abolished the weakness of the indicator and not the supplement.

When the patient is prone, the hamstrings are a convenient muscle to test. Even in the situations that I mentioned earlier, where there was an inability to isolate an indicator muscle. Many times the hamstrings can be tested when nothing else can. The procedure may be performed with the patient sitting or supine using the apponens as an indicator.

Many patients present with acute symptoms that are of a visceral origin. The occipital fiber will not only confirm that suspicion, it will also locate the source of abnormal function. The nutritional management of an acute case, many times involves a frequent (sometimes hourly) dose of the supplement. Examples are calcium lactate during menstral cramps, an acid calcium for bursitis, or adrenal tissue for an acute category two-posterior ilium. A nutritional test using an occipital fiber becomes a valuable tool in these acute cases. Especially when the doctors office is stocked with the products of several different companies.

Obviously, a surrogate must be used if the patient is an infant or a small child. Crush the tablet and place a small

amount of the powder on the child's tounge. If the child is irritable or apprehensive, quickly screen the occipital fibers. There may be enough information from that palpation to formulate some sort of natural therapy.

Summary:

An occipital fiber, that will therapy localize, can be an alternate means of evaluating a patients need for nutritional supplementation. The procedure is simply the substitution of an occipital fiber for an indicator muscle. The substitution becomes necessary when an indicator or a patient can not be tested in an artful fashion.

References:

De Jarnette, Major Bertrand, 1979, Sacro-Occipital Technic Nebraska City, Nebraska

Walther, David, 1981, Applied Kinesiology Volume I, basic procedures and muscle testing, Systems D.C. Pueblo, Colo.

Rosen, Marc S., 1981, The Occipital Fiber a Diagnostic Tool for the Applied Kinesiologist, Collected Papers of the I.C.A.K.

STANDARDIZED TEACHING

NOTES

presented by: Richard Roy D.C.,

The following notes are an extract of notes that I wrote, as a project, to standardize the teaching materials and make it easier to learn.

You will see on the next pages, the carpal tunnel syndrome the pisiform-hamate syndrome.

For the new comer these 2 problems will be easier to learn and assimulate and compare.

CARPAL TUNNEL:

Some indications:
-Median nerve paresthesia of the volar surface of the first 3½ digits.
-The patient drops things for no reason, the patient has difficulty in opening jars, doors.
-The patient has sensory disturbances of the hand and arm.
-Sometimes shoulder or elbow pains.
-Sometimes it is invloved in tennis elbow or golfer elbow.

Causes:
-Trauma
-Ileo-cecal valve

Muscular relationship:
-The opponens pollicis muscle will be weak.

Examination:
1) Test the opponens muscles: i) Hand in the supine position.
ii) Hand in the prone position.
iii) Palm to the right.
iv) Palm to the left.
v) Wrist in flexion.
vi) Wrist in extension.
2) You can T.L. to the wrist and confirm that the problem is at the wrist.
3) Also check the following muscles: i) Pronator quadratus
ii) Pronator Teres
iii) Supinator
4) Check if nutrition will cancel the weakness.
5) Check if support will help the condition.

Treatment:
NEXT PAGE

CARPAL TUNNEL:

Treatment:

1) Treat the pronator quadratus muscle; M.S.O., G.T.O., OR-IN.
2) Treat the pronator teres muscle; M.S.O., G.T.O., OR-IN.
3) Treat the supinator muscle; M.S.O., G.T.O., OR-IN.
4) Treat the opponens pollicis (if necessary); M.S.O, G.T.O., OR-IN.
5) N.L. for the adductors muscles.
6) Traction the wrist and thrust the radius toward the ulna.

Nutrition:

-Raw bone concentrate
-B-6

Support:

-When applicable the support should be worn for a period of 2 weeks.

PISIFORM-HAMATE:

Some indications:
-Ulnar nerve paresthesia of the volar surface of the small finger and the lateral ½ of the ring finger.
-The patient drops things for no reason, the patient has difficulty in opening jars, doors.
-The patient has sensory disturbances of the hand and arm.
-Sometimes shoulder or elbow pains.
-Sometimes it is involved in tennis elbow or golfer elbow.

Causes:
-Trauma
-Ileo-cecal valve

Muscular relationship:
-The opponens digiti minimi muscle will be weak.

Examination:
1) Tets the opponens muscles: i) Hand in the supine position.
ii) Hand in the prone position.
iii) Palm to the right.
iv) Palm to the left.
v) Wrist in flexion.
vi) wrist in extension.
2) You can T.L. to the wrist and confirm that the problem is at the wrist.
3) Also check the following muscles: i) Pronator quadratus.
ii) Pronator teres.
iii) Sipinator.
4) Check if nutrition will cancel the weakness.
5) Check if support will help the condition.

Treatment:
NEXT PAGE

PISIFORM-HAMATE:

Treatment:

1) Treat the pronator quadratus muscle; M.S.O., G.T.O., OR-IN.
2) Treat the pronator teres muscle, M.S.O., G.T.O., OR-IN.
3) Treat the supinator muscle, M.S.O., G.T.O., OR-IN.
4) Treat the opponens digiti minimi (if necessary); M.S.O., G.T.O., OR-IN.
5) N.L. for the adductors muscles.
6) Thrust the pisiform back into place.

Nutrition:

-Raw bone concentrate
-B-6

Support:

-When applicable the support should be worn for a period of 2 weeks.

CONCLUSION:

The project can be enlarged and a committee could be formed so that clinical and treatment procedures can be established so that Applied Kinesiology does not vary with each and every teaching diplomates.

THE LINK BETWEEN THE NERVOUS SYSTEM AND BODY CHEMISTRY

Amino Acids as Precursors to Neurotransmitters and Hormone Function and the Use of Sp-21/K-27 in Balancing Body Function

Walter H. Schmitt, Jr., D.C.

ABSTRACT : The effects of various hormones on body chemistry patterns are explored in light of clinical tools to return fundamental imbalances to normal levels of functions. The significance of spleen-21/kidney-27 (Sp-21/K-27) technique takes on new importance as a tool for sympathetic/parasympathetic balancing.

Tyrosine need is seen when muscles on the right side of the body are affected by right brain activity and muscles on the left side of the body are affected by left brain activity. Tryptophan need is seen when muscles on the right side of the body are affected by left brain activity and muscles on the left side of the body are affected by right brain activity. Vitamin B-6 (pyridoxine) may neutralize either of these patterns. The use of the amino acids tyrosine and tryptophan supercedes the need for several commonly employed A.K. techniques such as pituitary drive and pineal correction. Multiple, seemingly unrelated factors such as biochemistry, dietary carbohydrate and protein, and nervous system function become unified under the application of the AK techniques of muscle testing with right brain-left brain activity. Complexities melt into simplicities of clinical applications to create a harmony within all of the systems of the body.

INTRODUCTION

The use of muscle testing as a tool for analysing nervous system function was first introduced by Dr. George Goodheart in 1964.[1] In 1968 Goodheart published his findings relating to specific muscle weaknesses and specific nutritional requirements.[2] In 1980 Goodheart published his findings regarding the relationship of specific patterns of muscle weakness and left brain and right brain activity[3] in relationship to the electron poising system, as discussed by James Pershing Isaacs.[4,5] The fact that body chemistry is somehow reflected in the nervous system via muscle weakness patterns has made available a tool to those practicing standard applied kinesiological procedures which has been unsurpassed as an aid in diagnosing and treating specific nutritional imbalances in patients.

ELECTRON POISING SYSTEM

The electron poising system, as discussed by Isaacs[4,5] is similar in importance to the concepts of hydrogen ion buffering. Hydrogen ion buffering is fundamental for normal homeostasis in the human body. The hydrogen ion (H^+ -- a positively charged ion) is the smallest positively charged chemical particle which takes place in chemical interactions. Its counterpart, the electron, is the smallest negatively charged particle which takes part in chemical changes in the body or elsewhere. Just as there is a hydrogen ion buffering, so is there an electron "buffering," or as is termed by Isaacs and his associates, an electron "poising" system. And

just as the hydrogen ion buffering system is necessary for normal homeostasis, so is the electron poising system essential for normal functioning of the body.

The electron poising system is based on an adequate supply of certain vitamins, minerals, and hormones, which allow a normal flow of electrons into and out of the cytoplasm of the cell. This system allows homeostatic levels of oxidation and reduction reactions to occur within the cell. An excessive supply of electrons will cause the elements of an individual cell to become over oxidized and literally burn itself up. A deficient supply of electrons or excessive supply of reducing equivalents (hydrogen ions or equivalent) will not afford the opportunity for chemical reactions to take place in the cell.

In a previous paper[6] this author has discussed the relationships between what are called the "long term set points" in the electron poising system and right brain-left brain activity. The flow rate of hydrogen ions (reducing equivalents) from the left side of the curve (See Figures 1, 2, and 3) and the flow of electrons into the system from the right side of the chemical equation (See Figures 1, 2, and 3) must be in balance for proper balance of cellular chemical reactions to take place. The essential elements for the proper availability of reducing (H^+) or oxidizing (e^-) equivalents (hydrogen ions or electrons, etc.) are primarily vitamins and minerals (A, C, E, copper, manganese, zinc, iron, selenium) as can be seen in Figure 3.

FIGS #1, 2 + 3

THE "ELECTRON POISING" SYSTEM

COPPER CATALYZES THE COUPLING OF GLUTATHIONE AND ASCORBIC ACID. THIS Cu^{++}, GLUTATHIONE, ASCORBIC ACID COMPLEX FUNCTIONS TO "POISE" ELECTRONS FOR THE OXIDATION-REDUCTION ATTENDALS OF THE CELL

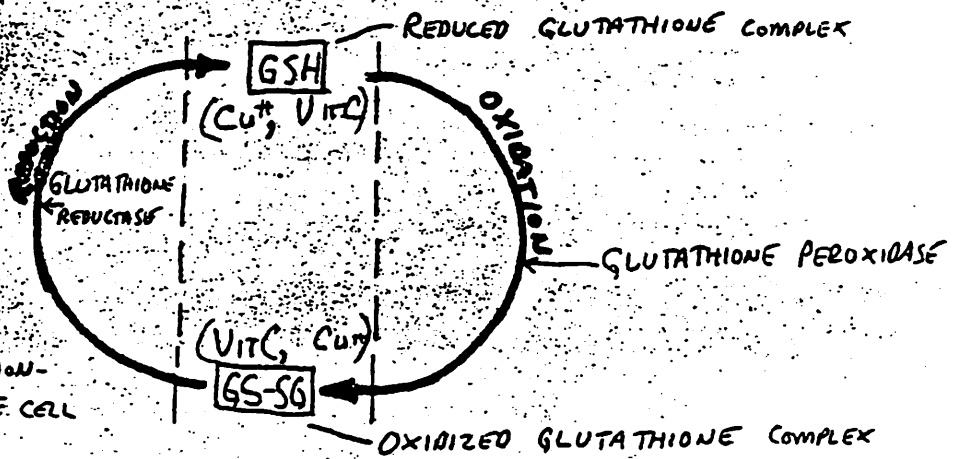


FIG. 1

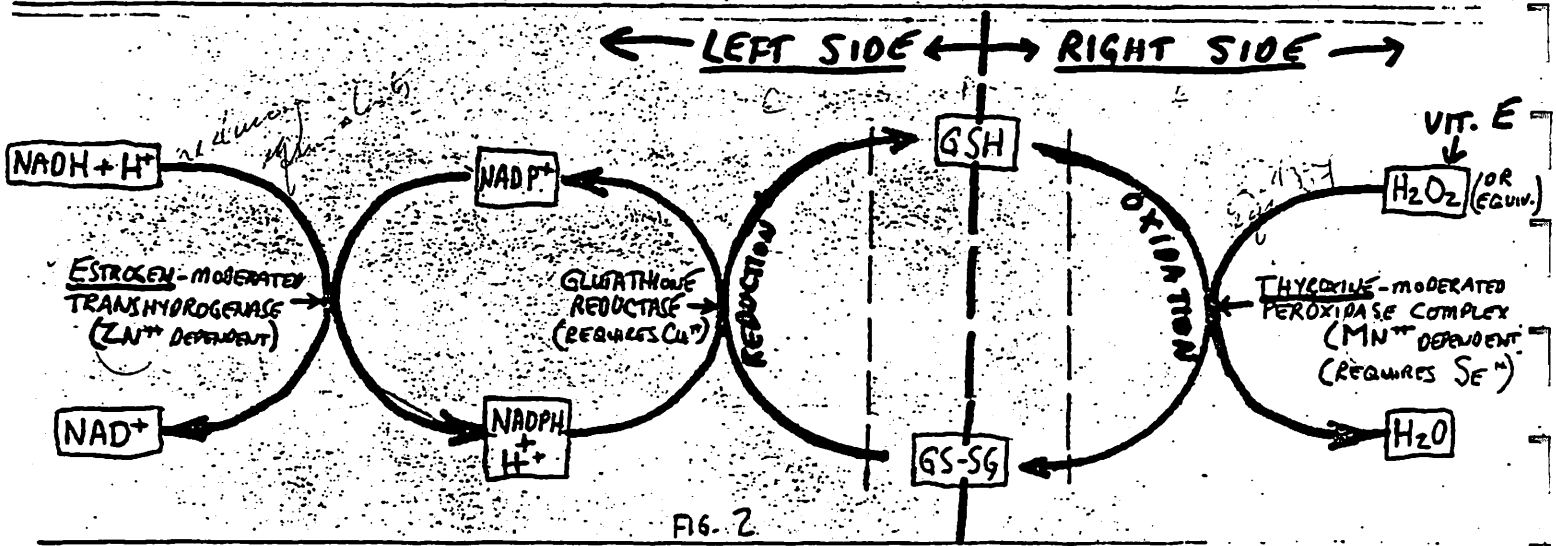


FIG. 2

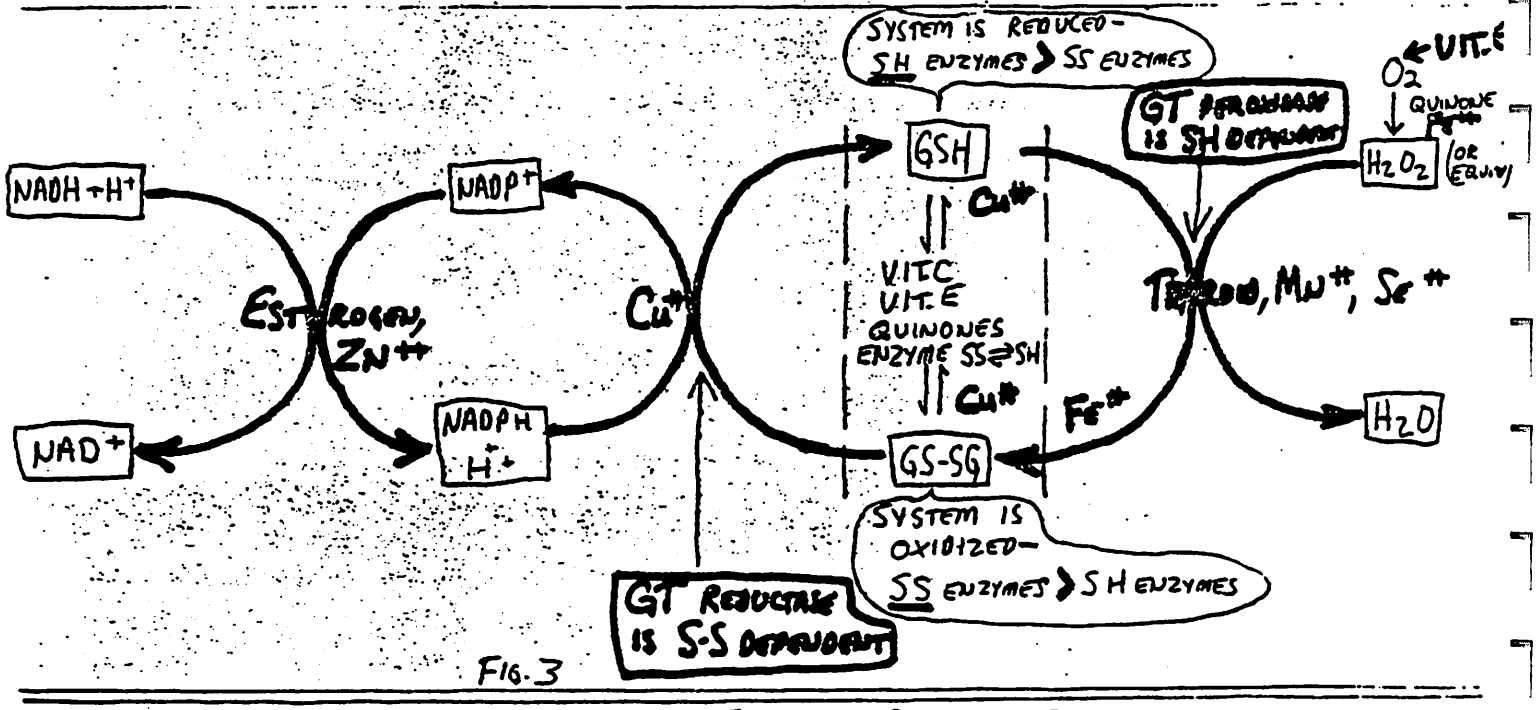


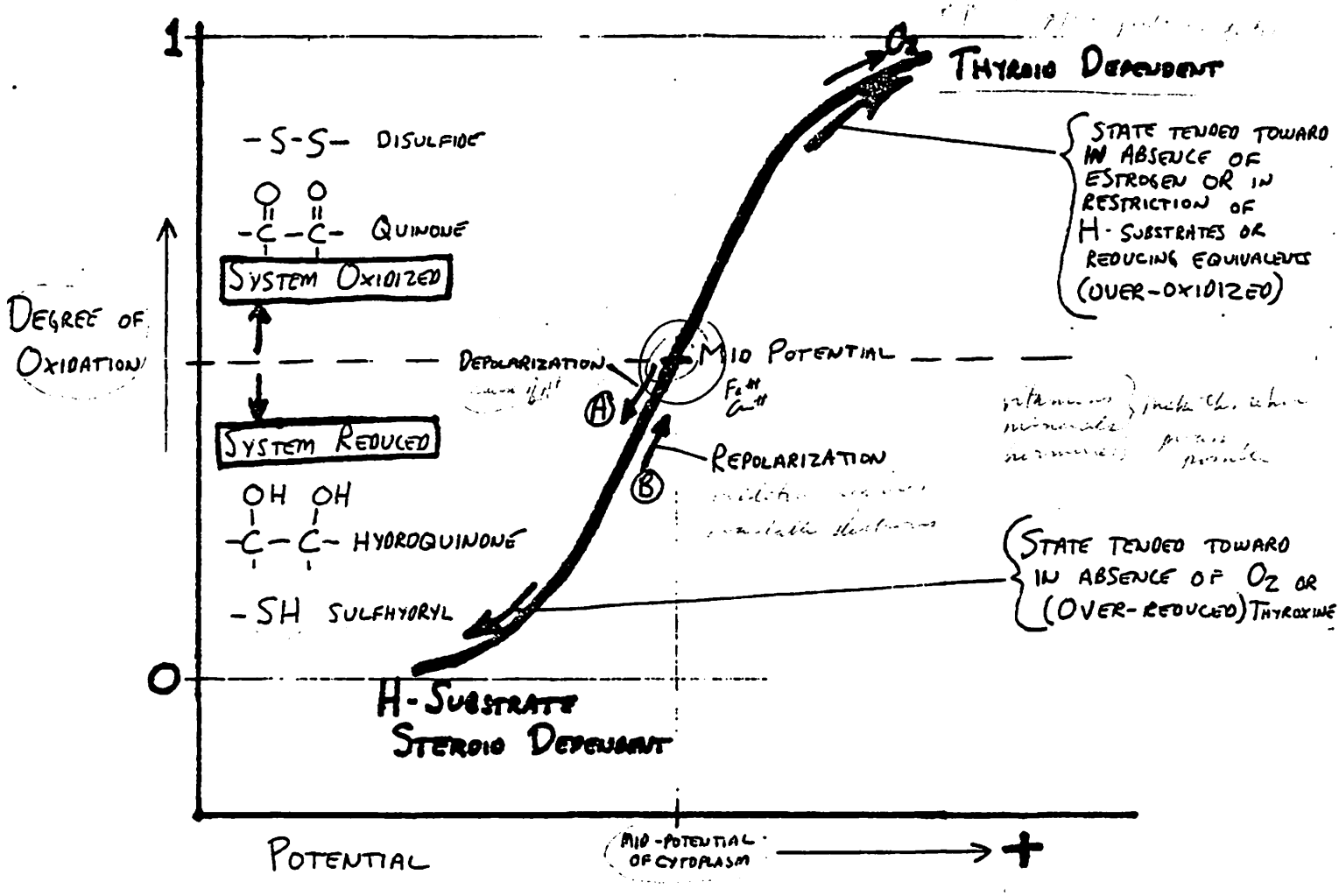
FIG. 3

ADAPTED FROM "A PRÉCIS ON CELLULAR ELECTRON POISING, ERGODIZATION, AND MOLECULAR QUANTIZATION" BY JAMES PERSHING ISAACS AND JOHN C. LAMB, 6TH ANNUAL TRACE MINERAL CONFERENCE, UNIVERSITY OF MISSOURI, c. 1974.

FIG. #4

DYNAMICS OF THE ELECTRON POISING ACTION OF THE SH/SS ENZYME CONTROL SYSTEM

ADAPTED FROM "A PRÉCIS ON CELLULAR ELECTRON POISING, ERGODIZATION, AND MOLECULAR QUANTIZATION" BY JAMES P. ISAACS & JOHN C. LAMB; 6TH ANNUAL TRACE MINERAL CONFERENCE, UNIVERSITY OF MISSOURI, c. 1974



- CELL DESIRES TO BE AT MID-POTENTIAL FOR 50:50 RATIO OF SH:SS MOLECULES. THIS ALLOWS THE BEST OPTIONS FOR THE ACTIVITY OF: 1) STRUCTURAL PROTEINS, 2) ENZYMES, 3) NUCLEOPROTEINS, CHROMOSOMES, AND THE SPINDLE OF THE CELL.

(A) DEPOLARIZATION OF THE CELL – CHANGE IN -SH/S-S RATIO (TOWARD -SH) AND INTRACELLULAR ENZYME ACTIVITY

(B) REPOLARIZATION – RETURN TOWARD NORMAL -SH/S-S RATIO

The electron poising curve (Figure 4) summarizes the relationship between changes in electrical potential of the cell and rates of oxidation. There is a cell cytoplasm mid potential which is the mid point of the curve, which is normal in homeostasis. This allows reduction and oxidation to take place in a cell, which will change the relative ratio of sulfhydryl (S-H) and disulfide (-S-S-) enzymes to be activated during different phases of a cell's function. For example, when a depolarizing agent (e.g., acetylcholine) approaches a cell membrane, there is a depolarization which takes place, requiring a change toward a reduced state of the cytoplasm and activation of a number of sulfhydryl (S-H) enzymes to be activated in order for the muscle cell to contract. For relaxation to take place, a change in enzyme balance is necessary toward deactivation of the sulfhydryl (S-H) enzymes and an activation of disulfide(-S-S-) enzymes, in order for the cell to return to its normal resting state.

The ability of the cell to respond to depolarization and repolarization (and therefore the ability of the muscle to contract and relax) depends on adequate supply of the various nutrients mentioned above. The rates at which this nutrient-based system is able to function in the delivery of reducing and oxidizing equivalents are dependent upon hormones, which are the so-called "long term set points" of the electron poising system. From the left side of Figures 2 and 3, estrogen modulates the number of reducing equivalents which will be released into the cytoplasm, regardless of the supply of

the other electron poising nutrients (vitamin C, copper, zinc, and iron). On the right side of the curve (Figures 2 & 3), thyroid hormone modulates the number of electrons which are allowed into the system, assuming adequate supply of the other essential nutrients (vitamin E, manganese, iron, selenium).

It is the relative supplies of steroids (estrogen) on the left and thyroid hormones on the right which determine the so-called "long term set points" of the cell cytoplasm and the rate and intensity at which chemical reactions can take place therein. If there is an increase in either or both of these hormones (estrogen, thyroxine), there will be an increased flow of reducing equivalents and electrons, respectively, into the cytoplasm, allowing for greater activity of the chemical cell functions. Likewise, if there is a restriction of estrogen and thyroxine availability, there will be a restriction of the number of reducing equivalents and electrons, respectively, which will be available for chemical reactions in the cytoplasm, therefore restricting the amount of enzyme activation within the cell, therefore restricting the function of the cell.

For example, a restriction of estrogen and thyroxine will cause a diminished potential for muscle cell contraction; that is, normal depolarization will result in lesser amount of contraction because there will be fewer enzymes available to cause contraction; and/or there will result slower rate of relaxation or incomplete relaxation due to the unavailability of the necessary -S-S- enzymes normally activated during

repolarization of the cell. It is the long term set points (the steroid and the thyroid hormones) which act as governors on the engine of the body cellular chemistry.

These long term set points act as "tie-down" points on the electron poising curve (Figure 4), as if the electron poising curve were a propeller and the lower left end of the curve were nailed down by the amount of steroid (estrogen) available and the upper right end of the curve were nailed down by the amount of thyroxine available. If the electron poising curve is a propeller, the mid point is maintained on the drive shaft by the presence of iron (and also copper). In this discussion we will assume adequate supplies of iron (and copper). The patterns present in iron (and copper) unavailability were discussed in a previous paper.[6]

CHANGES IN LONG TERM SET POINTS

When the long term set point factors of iron and copper are in adequate supply, this allows the electron poising curve (Figure 4) to appear as a propeller blade anchored by a mid-line shaft and having the ability to rotate clockwise or counterclockwise around the mid-point. If the curve rotates in a counterclockwise fashion, this would be parallel to an increased availability of steroid (estrogen) and thyroid hormones which would allow a greater flow of reducing equivalents (hydrogen ions) and the electrons accross the cell cytoplasm, and therefore greater changes in the response of the cytoplasm to the depolarization process. That is, allowing more reducing equivalents in from the left side of Figures 2 and 3, and more oxidizing electrons in from the

right side of Figures 2 and 3, allows a counterclockwise rotation of the electron poising curve (Figure 4). This results in a greater activation of S-H enzymes for the same amount of change in cell electrical potential (depolarization) and a greater activation of -S-S- enzymes activation during repolarization for this same amount of change in electrical potential. This is seen in Figure 5, when compared with Figure 4. This pattern of activity is present in greater-than-normal endocrine activity, for example, in the case of excessive pituitary drive of both thyroid and steroid hormone production, and is represented by Figure 5.

If there are deficiencies of steroid (estrogen) and thyroid activity, there will be fewer reducing equivalents (H^+) from the left side of Figures 2 and 3 available and fewer electrons from the right side of Figures 2 and 3 available to the cytoplasm when they are needed. This causes a decreased activation of S-H enzymes during normal depolarization (i.e., normal movement to the left) and a similar decrease in activation of -S-S- enzymes during normal repolarization (normal movement to the right). This dampening effect on the cell chemical functioning is seen represented by Figure 6, wherein the electron poising curve is rotated in a clockwise fashion. In this curve (Fig. 6) each given increment of change in cell electrical potential (depolarization/repolarization) is met by less-than-normal S-H enzyme/-S-S- enzyme changes in the cytoplasm therefore reducing the amount of function in the cell, given a standard depolarization change in electrical

Fig. 5

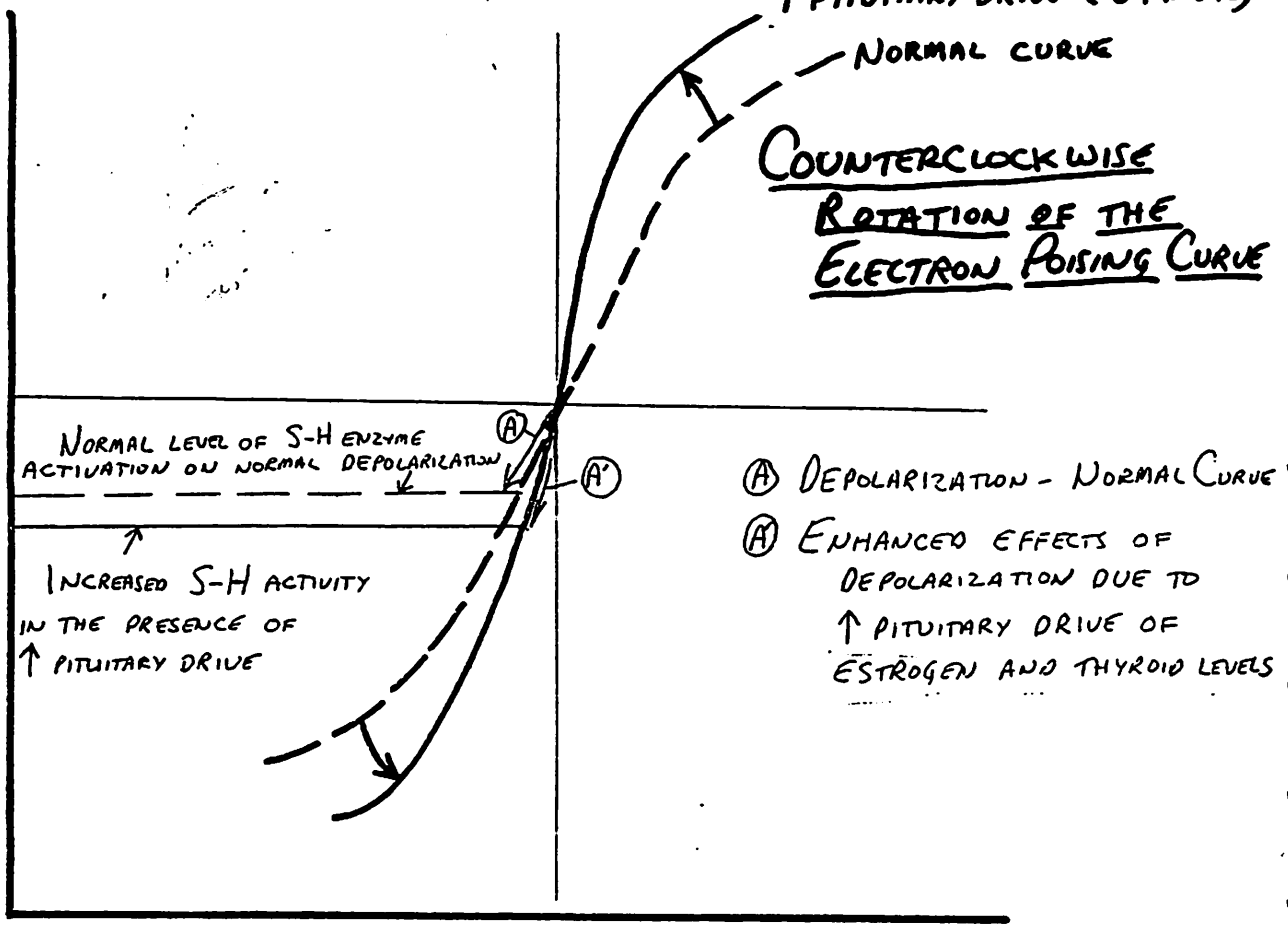
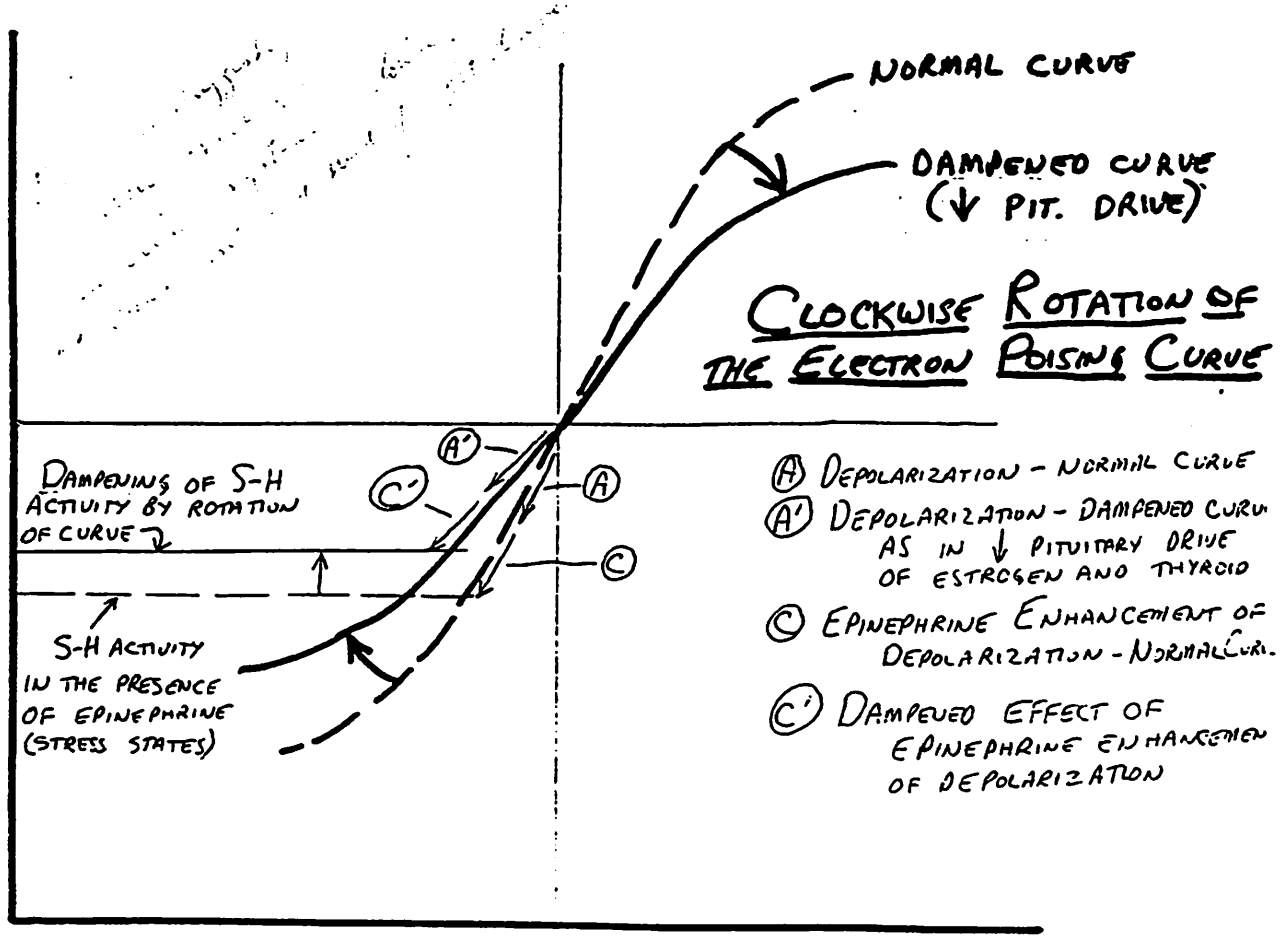

↑ PITUITARY DRIVE (↓ PINEAL)
NORMAL CURVE
COUNTERCLOCKWISE ROTATION OF THE ELECTRON POISING CURVE
NORMAL LEVEL OF S-H ENZYME ACTIVATION ON NORMAL DEPOLARIZATION
INCREASED S-H ACTIVITY IN THE PRESENCE OF ↑ PITUITARY DRIVE
Ⓐ DEPOLARIZATION - NORMAL CURVE
Ⓐ ENHANCED EFFECTS OF DEPOLARIZATION DUE TO ↑ PITUITARY DRIVE OF ESTROGEN AND THYROID LEVELS

Fig. 6


NORMAL CURVE
DAMPENED CURVE (↓ PIT. DRIVE)
CLOCKWISE ROTATION OF THE ELECTRON POISING CURVE
DAMPENING OF S-H ACTIVITY BY ROTATION OF CURVE
S-H ACTIVITY IN THE PRESENCE OF EPINEPHRINE (STRESS STATES)
Ⓐ DEPOLARIZATION - NORMAL CURVE
Ⓐ' DEPOLARIZATION - DAMPENED CURVE AS IN ↓ PITUITARY DRIVE OF ESTROGEN AND THYROID
Ⓒ EPINEPHRINE ENHANCEMENT OF DEPOLARIZATION - NORMAL CURVE
Ⓒ' DAMPENED EFFECT OF EPINEPHRINE ENHANCEMENT OF DEPOLARIZATION

potential of the cell. This situation, where the electron poising curve is rotated clockwise, is equivilent to a deficient pituitary drive of the endocrine system, particularly the pituitary-thyroid and pituitary-steroid (estrogen) stimuli.

The endocrine system, then, has a fundamental control over the activity of the body chemistry in each individual cell of the body which is sensitive to changes in electrical potential as stimuli for cytoplasmic enzyme activation, and therefore, cell function (e.g., muscle cell: muscle contraction and relaxation).

THE HORMONAL EFFECTS OF EPINEPHRINE

Isaacs[5,6] discusses the effects of epinephrine and serotonin in altering normal responsiveness of a cell to depolarization. The effect of epinephrine can be seen in Figure 7. Epinephrine increases or enhances the reducing effects of cell depolarization in the cytoplasm. That is, epinephrine's presence increases the changes in electrical potential in the cell, increasing movement along the electron poising curve down and to the left, therefore increasing the availability of sulfhydryl enzymes. This, in turn, increases the functions of the cell, for example, increasing muscle contraction.

This might be what we would find in stress-related states, where the adrenal glands, as a result of stress, produce increased amounts of epinephrine which circulates throughout the body. It is the type of thing we would expect to see in a "fight or flee" reaction (sympathetic reaction). In this sense, epinephrine acts as a hormone by circulating

Fig. 7

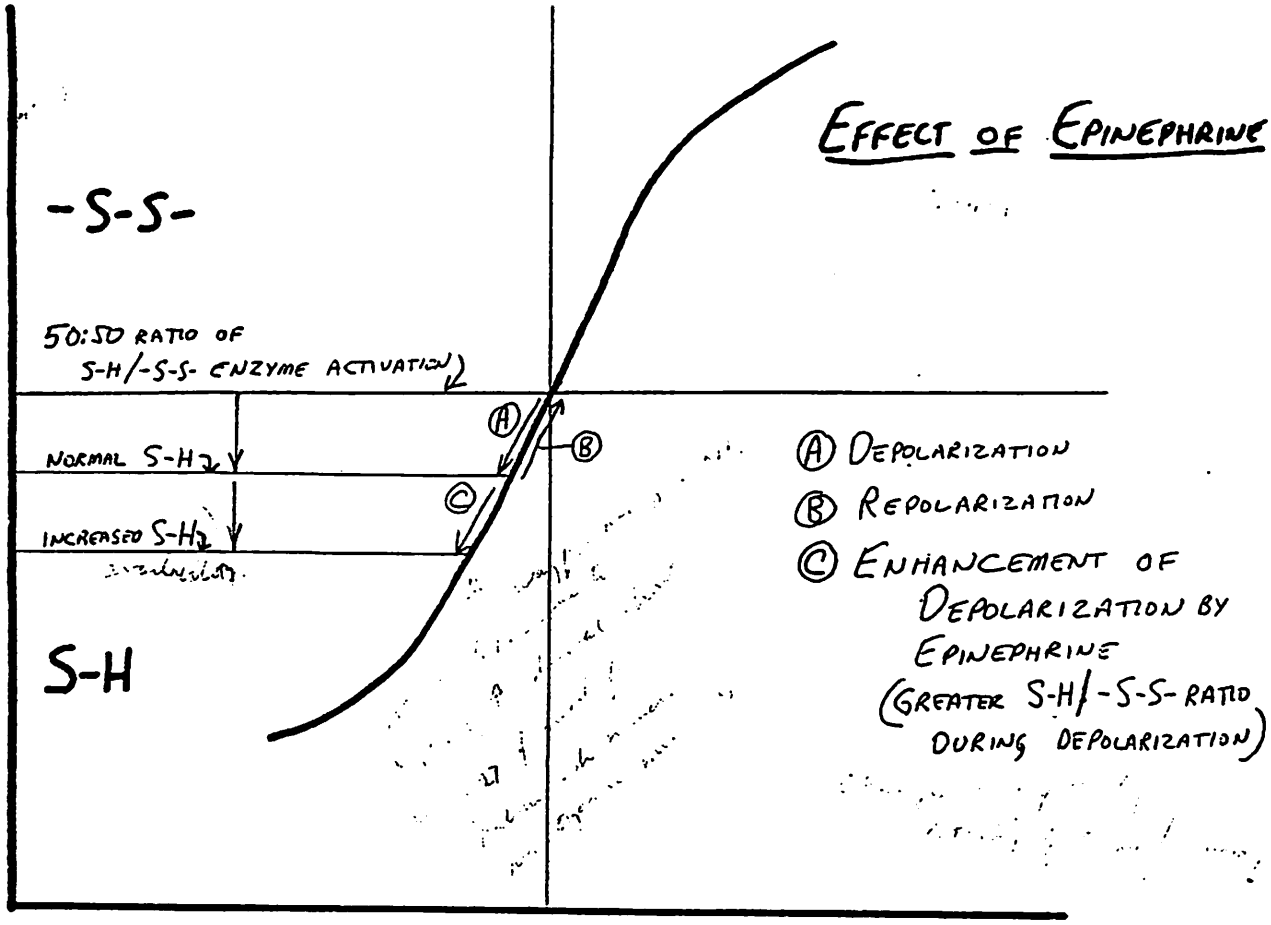
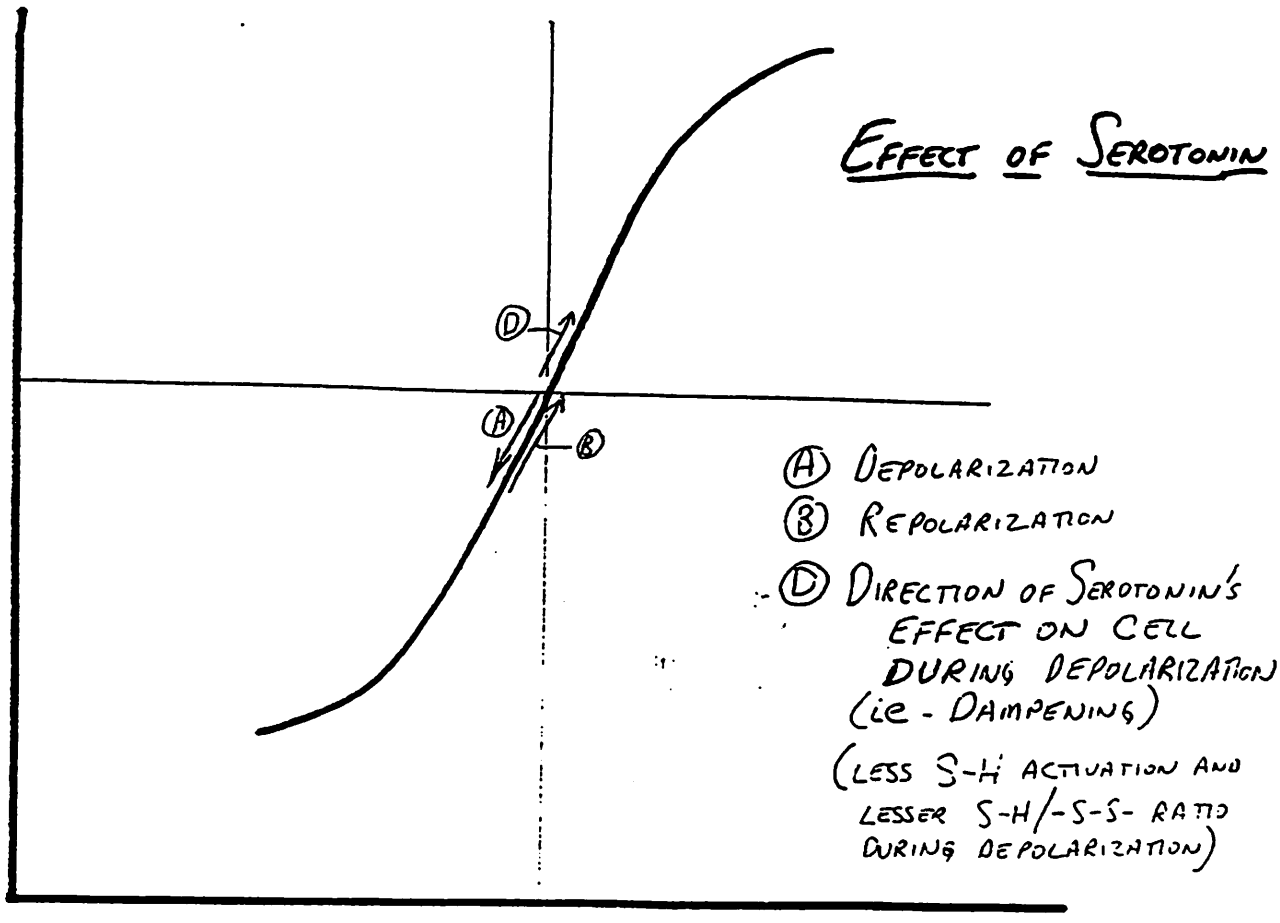

EFFECT OF EPINEPHRINE
-S-S-
50:50 RATIO OF S-H/-S-S- ENZYME ACTIVATION
NORMAL S-H
INCREASED S-H
S-H
A
B
C
(A) DEPOLARIZATION
(B) REPOLARIZATION
(C) ENHANCEMENT OF DEPOLARIZATION BY EPINEPHRINE (GREATER S-H/-S-S- RATIO DURING DEPOLARIZATION)

Fig. 8


EFFECT OF SEROTONIN
D
A
B
(A) DEPOLARIZATION
(B) REPOLARIZATION
(D) DIRECTION OF SEROTONIN'S EFFECT ON CELL DURING DEPOLARIZATION (ie - DAMPENING)
(LESS S-H ACTIVATION AND LESSER S-H/-S-S- RATIO DURING DEPOLARIZATION)

through the system and having its effect on cell function throughout the body.

During prolonged states of stress, however, increased amounts of epinephrine will potentially cause a depletion of the nutrients available for electron poising activity. That is, excessive epinephrine will cause an enhancement of muscle contraction, which requires an increased number of reducing equivalents available during depolarization and an increased number of electrons available during repolarization. Therefore the cell will require availability of more than adequate supplies of the nutrients (vitamins A, C, E, copper, manganese, zinc, iron and selenium) for these functions to be able to adequately keep pace with the increased drive being placed on the system by epinephrine.

It is this author's interpretation that the long term effects of stress on the electron poising system are ones in which the enhancement of depolarization created by increased epinephrine activity causes a potential long term hazard to cell function by depleting the cell of the electron poising nutrients which are essential to keep pace with this increased activity. In an effort to protect itself and conserve nutrients which the body may not be able to supply from dietary sources, the body in the presence of chronic stress, and subsequent increased epinephrine availability, will cause a dampening of the effect of epinephrine by creating a clockwise shift in the electron poising curve, as is seen in Figure 6. This clockwise shift or dampening which takes place in the electron poising curve is carried out via the endocrine system

by diminishing the pituitary drive to the thyroid, ovaries, and/or adrenals. This diminished pituitary drive, then, allows a clockwise turning of the electron poising curve (Figure 6). This means that even the increased change in cell electrical potential which takes place during epinephrine enhanced depolarization will be met by only normal changes in S-H enzyme activation due to the dampening effects of restricted estrogens. Likewise, the changes in -S-S- enzyme activation will be equally dampened due to restricted thyroxine during repolarization. The dampening effect of decreased availability of estrogen and thyroxine (due to decreased pituitary drive) will be present in order that the body can conserve its electron poising nutrients which otherwise would most certainly become depleted. We will discuss later in this paper the muscle testing ramifications of this particular pattern.

THE HORMONAL EFFECTS OF SEROTONIN(5-HYDROXYTRYPTAMINE)

Isaacs[5] describes the effects of serotonin on the electron poising system as dampening, as can be seen in Figure 8. Isaacs states that serotonin has the exact opposite effect on the electron poising system from that of epinephrine. Serotonin's presence will cause a dampening of the activation of S-H enzymes during depolarization by lessening the distance of the shift down and to the left along the electron poising curve during depolarization. Therefore, it will also create a dampening effect during repolarization, since repolarization will tend to shift the position on the curve back to the cell's mid potential, and not beyond.

THE EFFECTS OF SPLEEN-21 AND K-27

In an earlier paper[7] this author discussed changes in body chemistry which resulted from tapping acupuncture points left spleen-21 and right kidney-27 on patients who showed positive therapy localization to these points. This was first described by Goodheart in 1978.[8] It was this author's suggestion that the almost immediate changes which have been observed in numerous body chemistry parameters were in reality secondary to changes created in the acid-alkaline balance in the body. At present, it is useful to expand the concept of spleen-21/K-27's effects. A seemingly more appropriate viewpoint is that tapping Sp-21/K-27 affects body chemistry via alterations in the relative sympathetic-parasympathetic balance in the body.

It has long been known that sympathetic nervous system functions in the body can be enhanced by the supplementation of acid ash minerals. Phosphorus is a potent acid ash mineral and is found in high concentrations in cereals and grains. Nutritional supplementation of phosphoric acid can be used in the form of ortho-phosphoric acid.

Likewise, parasympathetic nervous system support is obtained through the use of alkaline ash minerals. Potassium and magnesium are good examples of alkaline ash minerals and are found in green,leafy vegetables. Standard Process Labs' "Organic Minerals" is a nutritional supplement source of alkaline ash minerals. In the previous paper on Sp-21/K-27, it was stated that Sp-21/K-27 therapy localization could be changed from positive to negative or vice versa by placing

This dampening effect of serotonin (Figure 8) decreases the availability of hydrogen ions (reducing equivalents) and electrons for activation of S-H and -S-S- enzymes, respectively, in the cytoplasm. The result of serotonin's presence is to compromise the cell's capacity to respond with higher levels of function during times of need.

It is this author's interpretation that the long term effects of serotonin presence will cause a compensatory change in endocrine function which will cause a counterclockwise rotation of the electron poising curve, similar to that seen in Figure 5. That is, the body's efforts to compensate for the increased presence of serotonin, which has a dampening effect on the electron poising system, is to increase pituitary drive of the thyroid and steroid (estrogen) production, so as to increase the availability of reducing equivalents (hydrogen ions) and electrons available when the system requires them. The net effect of this increased availability of estrogen and thyroxine causes the counterclockwise rotation of the electron poising curve, as in Figure 5, therefore increasing availability of reducing equivalents (hydrogen ions) during depolarization, in spite of the dampening effect of serotonin.

Therefore, the long term effect of increased serotonin presence on the electron poising curve is to create a counter-clockwise rotation. This is in exact contrast to the long term effects of increased presence of epinephrine, which causes the electron poising curve to rotate in a clockwise direction (See Figures 7 and 6.)

acid ash and/or alkaline ash substances in the patient's mouth, depending on the condition of the patient. It is now felt that the relationship between acid-alkaline balance and Sp-21/K-27 actually represents the relative state of sympathetic-parasympathetic nervous system balance or imbalance.

Applying this concept to the electron poising system, one can see direct parallels between traditional concepts of sympathetic (and parasympathetic) activity and the effects of epinephrine (and serotonin) on the electron poising curve as described by Isaacs. As mentioned earlier, epinephrine's effect on the electron poising system is one of enhancing the effect of depolarization along the electron poising curve, increasing the movement along the curve farther down and to the left. (Figure 7) Epinephrine is the chemical mediator which is released during sympathetic nervous system activity. Therefore, in a sympathetic dominant (or highly stressed) individual, one can assume that the increased release of epinephrine into the circulation via sympathetic stimulation will create an electron poising curve for that person's cells like that in Figure 7.

Conversely, the effect of parasympathetic nervous system activity in the parasympathetic dominant individual will create a movement along the electron poising curve up and to the right, paralleling the activity of serotonin (Figure 3)

It is felt that in a normal long term set point balance of the electron poising curve (i.e., curve not rotated clockwise or counterclockwise - Figure 4), that the resting potential of the cell (i.e., normally the mid point of the

electron poising curve) can be caused to shift away from the mid point, resulting in a resting potential which is other than the mid point of the curve. This shift of the resting potential away from the mid point, either up and to the right (toward oxidation - Figure 10) or down and to the left (toward reduction - Figure 9) along the electron poising curve, makes for less-than-efficient function within the cell during depolarization and repolarization-- that is, an over-oxidized or an over-reduced state of the cytoplasm. This, of course, creates an over-activation of -S-S- enzymes (over-oxidized state) or S-H enzymes (over-reduced state) and therefore, dysfunction of the cell.

It is postulated by this author that when the resting potential of the cell is other than the mid potential of the electron poising curve, there will be positive therapy localization to left Sp-21 and right K-27 (in a right-handed individual). The situation when the resting potential is away from the mid potential will allow for normal steady state activity within the cell, but will <u>not</u> allow normal homeostatic processes to take place, therefore causing alterations of body chemistry (such as blood sugar, digestive enzymes production, etc.). This theory then implies that tapping left Sp-21/right K-27 in the standard fashion[8] causes a change in the "set" of the resting potential of the cell toward the mid potential, therefore creating a more normal balance of S-H and -S-S- enzymes in the cell during the resting state. It is felt that this then allows the cell to function at a more homeostatic level of activity, thereby

(nearly) instantly creating changes in body chemistry which are due to the normalization of that cell's function. This parallels what we see clinically.

Sp-21/K-27 activity will be positive in any patient who has a resting potential away from the mid point. If the patient has an increased sympathetic drive (which is related to the nervous system being set at a level of sympathetic dominance), the patient's resting potential will be other than the mid potential, in a direction down and left from the mid potential . (See Figure 9.) Positive therapy localization to left Sp-21 (and sometimes positive T.L. simultaneously to both left Sp-21 and right K-27) in these patients will be neutralized by placement of an alkaline ash mineral tablet on the tongue. The response to alkaline ash minerals is present in these patients because they require support of the parasympathetic nervous system in an effort to balance out the sympathetic dominance. Tapping Sp-21/K-27 will therefore cause a movement of the resting potential along the electron poising curve toward the mid point, resetting the nervous system at a level of sympathetic/parasympathetic balance, and decreasing the need for the support of alkaline ash minerals which would otherwise be necessary to correct the imbalance. Alkaline ash minerals in the form of dietary change and/or supplementation may be necessary, however, for the maintenence of the resting potential at the mid potential if the patient has an actual deficiency of such substances.

By the same token, if a patient has a parasympathetic dominance, the resting potential of the electron poising curve

Fig. 9

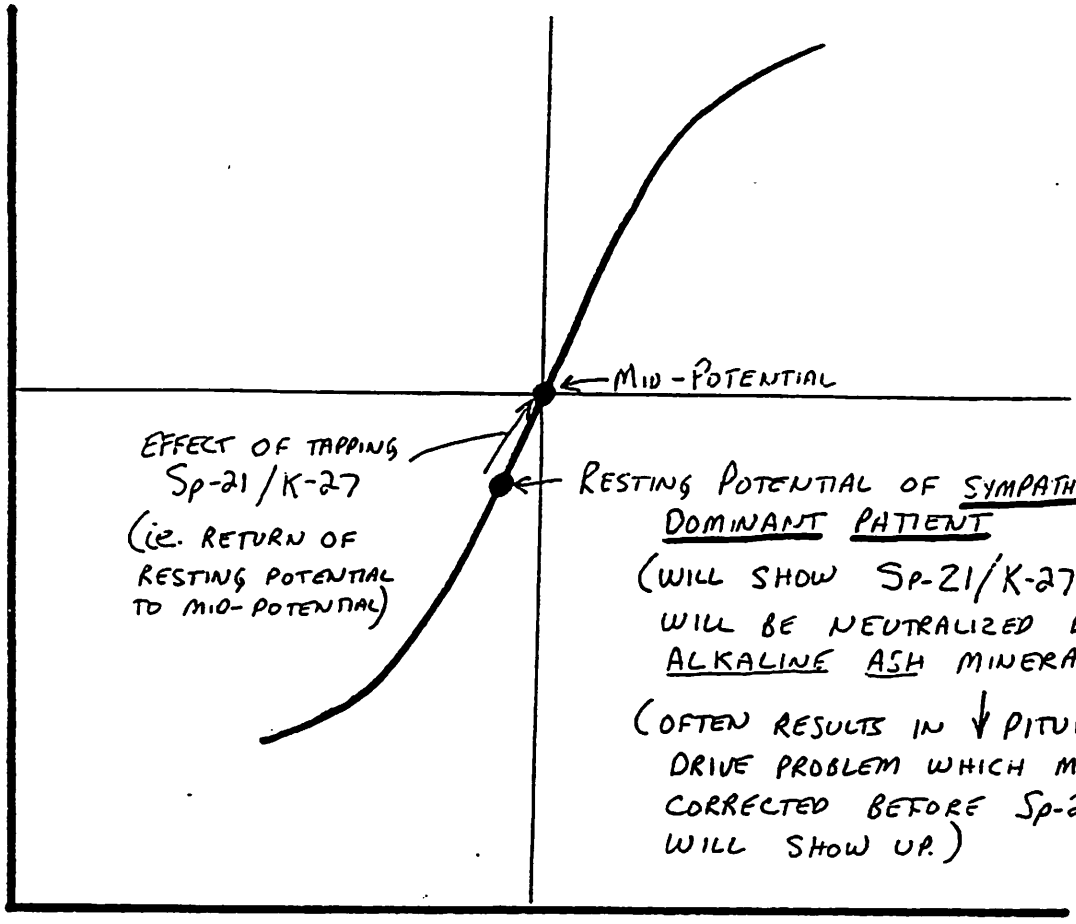
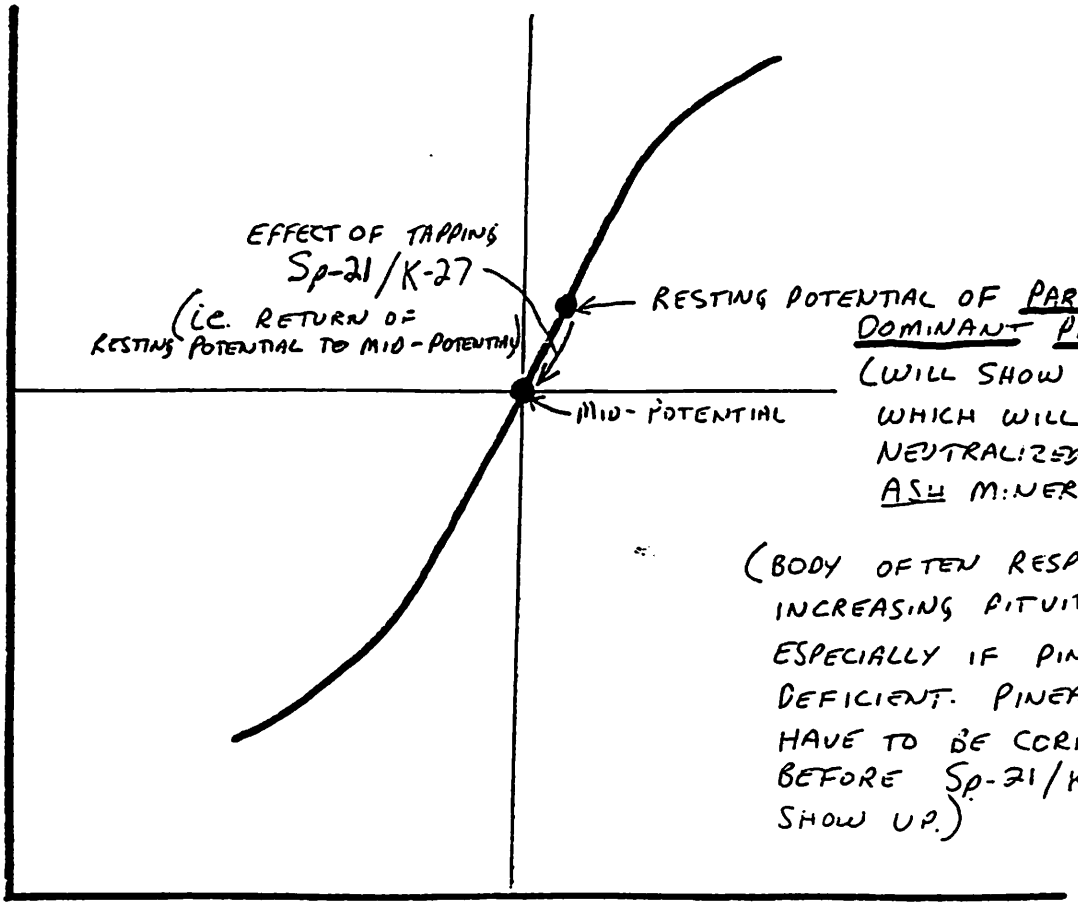

MID-POTENTIAL
EFFECT OF TAPPING Sp-21/K-27
(ie. RETURN OF RESTING POTENTIAL TO MID-POTENTIAL)
RESTING POTENTIAL OF SYMPATHETIC DOMINANT PATIENT
(WILL SHOW Sp-21/K-27 WHICH WILL BE NEUTRALIZED BY ALKALINE ASH MINERALS.)
(OFTEN RESULTS IN ↓ PITUITARY DRIVE PROBLEM WHICH MUST BE CORRECTED BEFORE Sp-21/K-27 WILL SHOW UP.)

Fig. 10


EFFECT OF TAPPING Sp-21/K-27
(ie. RETURN OF RESTING POTENTIAL TO MID-POTENTIAL)
RESTING POTENTIAL OF PARASYMPATHETIC DOMINANT PATIENT
(WILL SHOW Sp-21/K-27 WHICH WILL BE NEUTRALIZED BY ACID-ASH MINERALS)
MID-POTENTIAL
(BODY OFTEN RESPONDS BY INCREASING PITUITARY DRIVE, ESPECIALLY IF PINEAL IS DEFICIENT. PINEAL MAY HAVE TO BE CORRECTED BEFORE Sp-21/K-27 WILL SHOW UP.)

will be up and to the right of the normal mid potential (Figure 10). These patients will show positive therapy localization to Sp-21/K-27 which will be neutralized by the giving of an acid or an acid ash substance. Tapping Sp-21/K-27 will cause a shift of this patient's resting potential down and left along the electron poising curve towards the mid potential, therefore creating a homeostatic balance and decreasing the need for acid or acid ash substances. These substances may, however, be necessary in the form of dietary change and/or supplementation if the patient is deficient in them.

In summary, it is felt that Sp-21/K-27 tapping will normalize the electron poising curve resting potential toward the mid potential in patients who demonstrate nervous system, chemical, and/or clinical signs of sympathetic or parasympathetic dominance. That is, the "body language" of a sympathetic or parasympathetic dominance is a positive Sp-21/K-27 T.L.

The physician may interpret the position of the resting potential on the electron poising curve by identifying positive T.L. to Sp-21/K-27 and by observing whether an acid ash substance or an alkaline ash substance in the mouth neutralizes this positive T.L. If an alkaline ash substance neutralizes positive T.L. to Sp-21, it means the patient is stuck in an over-reduced resting potential, down and to the left of the mid point (sympathetic dominance - Figure 9). If an acid substance neutralizes positive T.L. to Sp-21, it implies that the patient is stuck at an over-oxidized resting potential, up and to the right of the mid potential (parasympathetic

dominance - Figure 10). It is thought that the most effective treatment for normalizing sympathetic/parasympathetic imbalance is Sp-21/K-27 technique when combined with other factors which will be discussed in the remainder of this paper. The use of nutritional supplementation as a supportive measure may be useful in some patients, however.

THE PITUITARY GLAND AND PITUITARY DRIVE

A very commonly used tool in applied kinesiology is pituitary drive technique.[3,9] Pituitary drive technique is found useful in endocrine system involvements when all endocrine gland-related muscles test strong and simple T.L. to each endocrine gland-related reflex (e.g., neurolymphatic) is negative. When pituitary drive problems are present, there is a positive two-hand T.L., one hand to the pituitary neurolymphatic reflex (at the glabella) and the other hand to one of the endocrine gland target organs of the pituitary. This two-handed T.L. will be neutralized by a respiratory assistance factor, usually inspiration assistance.

The pituitary drive technique is found very useful in patients with a low body temperature. The activation of the cranial respiratory mechanism with standard inspiration assistance correction (mastoid processes forward coincident with inspiration) for a prolonged period of time usually cause a noticeable increase of patient's temperature. This temperature increase, measured orally or in the axilla, occurs while performing the technique and sometimes requires several minutes of respiratory correction. This increase in temperature

may be as little as .2-.4° F. or as much as 2° F. or more. Many dramatic changes have been seen by applied kinesiologists when applying the pituitary drive technique.

Clinical responses indicate that pituitary drive technique increases the levels of function of the entire endocrine system, regardless of the target organ that is involved during two-hand T.L. Even though thyroid gland stimulation would seem to be the most likely reason for increasing body temperature, the pituitary drive technique seems to enhance the entire endocrine system and temperature increases may be seen in pituitary-adrenal, pituitary-gonadal, and/or pituitary-thyroid involvements.

The relationship of pituitary drive problems to the electron poising system was discussed recently by this author.[6] When there is a decreased pituitary drive of the endocrine system, there will be decreased outputs of estrogen (by the ovaries and/or adrenals) and thyroxine (by the thyroid), among other things. The decreased estrogen and thyroxine levels associated with a pituitary drive problem will cause alterations in the long term set points of the electron poising curve.

Problems of decreased pituitary drive will result in an electron poising curve which reflects the dampening effect present when estrogen and thyroxine availability is limited, that is, a clockwise rotation of the curve as is seen in Figure 6. Application of pituitary drive technique causes enhancement of the entire endocrine system, and an increase in the availability of estrogen and thyroxine, therefore causing the electron poising curve to rotate from the dampened position, as in

Figure 6, to the more normal pattern of Figure 4, as the technique is performed.

If we recall the reasoning discussed previously in this paper, we can understand why the body decreases pituitary drive, thereby rotating the electron poising curve clockwise in the first place. That is, in stress states, epinephrine will be released in increased amounts. The increased epinephrine will threaten the cell with depletion of the electron poising nutrients (A, C, E, zinc, manganese, copper, selenium). To compensate, the body will respond over a long period of time by diminishing pituitary drive, and therefore causing a rotation of the electron poising curve in a clockwise fashion, as seen in Figure 6, and a dampening of epinephrine's effects. This is the same pattern we see in a pituitary drive technique patient.

Further, if we take a patient who shows a pattern of pituitary drive involvement, he will show the pattern of muscle weakness responding to left brain-right brain activity, as discussed in this author's previous paper.[6] That is, the patient whose long term set point hormones are available at less than normal levels will have muscle weaknesses on the right side of the body which are affected by right brain activity, and muscle weakness on the left side of the body which is affected by left brain activity. As was previously discussed by this author, right brain activity affecting the right side of the body and left brain activity affecting the left side of the body has been associated with changes in the long term set points and diminished function of the ovaries

(and/or adrenal) and thyroid. This is most often related to a need for pituitary drive technique.

Patients who show a need for pituitary drive technique are those patients whose electron poising curves have shifted in a clockwise fashion, as in Figure 6. Performance of pituitary drive technique on these patients will cause a counterclockwise rotation of the curve back toward a normal state. But recall that these patients are in the states of lowered pituitary drive as a part of the body's compensation to the increased epinephrine of sympathetic dominance and/or stress. Correction of pituitary drive and counterclockwise rotation of the curve back toward normal position will counteract the body's attempt to compensate for the increased epinephrine. It is possible that pituitary drive technique can therefore lead to a depletion of electron poising nutrients and no change or an increase in symptoms to the patient. Or more likely, the body will again create the pituitary drive fault as a compensation and it will recur over and over again following correction. These negative results can be avoided if we look at the whole picture.

Following pituitary drive, previous muscle weaknesses and associated right brain-left brain activity are usually not present.Assuming that the patient is under chronic stress, pituitary drive correction causes the electron poising curve to shift back to a normal position, but then leaves the patient with the increased epinephrine and sympathetic dominance which are characterized by the shift in resting potential away from the mid potential, as in Figure 9.

This sympathetic dominance can then be neutralized by performing Sp-21/K-27 technique on the patient.

Following pituitary drive technique, positive Sp-21/K-27 T.L. is present in most patients when, prior to pituitary drive correction, these areas were negative to T.L. Tapping of Sp-21/K-27 following pituitary drive will move the resting potential of the curve back toward the mid point and will cause muscle weakness to recur in these patients. The muscle weakness which will be present will be the same muscles which were previously weak and which were previously associated with right brain-left brain activity, but now these muscle weaknesses will be present with no right brain-left brain activity present! These muscles can now be treated in a standard fashion using normal applied kinesiological techniques.

What we are doing through the use of muscle testing, right brain-left brain activity, and the use of Sp-21/K-27 to monitor sympathetic-parasympathetic balance, is to determine exactly where on the electron poising curve the patient's body chemistry is functioning, and exactly how the curve has adapted to changes in the body chemistry. Further, we can then make corrections to normalize body chemistry through endocrine related techniques (e.g., pituitary drive) and via sympathetic-parasympathetic balance by Sp-21/K-27.

It is interesting to note that following pituitary drive, most, if not all, of the patient's muscles will be strong. Positive T.L. will become present to left Sp-21 (and right K-27), where it was previously negative. However, at this point

the muscle weaknesses which were previously present can also be brought back without using Sp-21/K-27 activity, by placing a tablet of RNA (and/or Antronex, an antihistimine product) in the patient's mouth. The use of ribonucleic acid (and/or Antronex) for uncovering hidden problems was discussed by this author.[10]

It has become evident that the use of ribonucleic acid (and/or Antronex) to uncover hidden problems is related to a hyperadrenic (i.e., increased epinephrine, sympathetic dominant) state of the individual. There are numerous reasons for this, but discussion will be deferred to a future paper.

The fact that the sympathetic dominant individual will have increased production of epinephrine is the basis for facilitation of muscle function throughout the body, and therefore, a covering up of normal applied kinesiological findings. This is in keeping with neurophysiological principles. Epinephrine, acting as a neurotransmitter, causes excessive activity in the reticular formation of the brain stem. Likewise, epinephrine causes increased contraction of all muscles, via its effect on the electron poising system, therefore covering up many "normal" weaknesses. That is, with increased epinephrine present in the body, many muscles which would otherwise be weak become facilitated both neurologically and hormonally, and they test strong even though they may be weaker than their counterparts.

We no longer use ribonucleic acid and/or Antronex to uncover hidden faults in our office. Our present procedure, upon finding the need for ribonucleic acid and/or Antronex to uncover hidden weaknesses, is to investigate Sp-21 and K-27. In these patients, there is consistently positive T.L. to Sp-21/K-27. Upon correcting Sp-21/K-27, the exact same muscle weakness patterns become present in the clear which were previously only present with ribonucleic acid and/or Antronex. This interpretation of the usefulness of Sp-21/K-27 as a tool for uncovering hidden faults parallels and exceeds the usefulness of ribonucleic acid and/or Antronex, due to the therapeutic effect of tapping Sp-21/K-27. It helps to verify the relationship of Sp-21/K-27 as a tool for changing sympathetic-parasympathetic balance and it helps to increase our understanding the function of the patient who requires ribonucleic acid and/or Antronex to uncover their hidden faults.

THE PINEAL GLAND AND PITUITARY INHIBITION

The function of the pineal gland has long been a mystery. However it is now known that the pineal gland makes a hormone, melatonin, which has an inhibitory effect on the pituitary drive of the thyroid and the ovaries. In general, the pineal's effect, through its hormone melatonin, is to cause an inhibition of pituitary drive of at least two of the major endocrine target organs. Therefore, the pineal causes a supression of pituitary drive and a generalized depression of the endocrine system.[11]

The significance here is that the pineal gland's function is exactly opposite that of the pituitary function. It follows, then, that the patient who has a pineal deficiency or hypofunction will show the exact opposite effects in the endocrine system from the patient who has a pituitary deficiency (e.g., pituitary drive problem). That is, a pineal gland hypofunction will result in a lesser melatonin production with the result that the pituitary's drives to produce estrogen and thyroxine will be uninhibited. This will lead to an over-production of estrogen and thyroxine and the subsequent alteration in the long term set points of the electron poising curve. Therefore, the patient with the pineal gland hypofunction (decreased melatonin output) will be a patient whose electron poising curve will be rotated in a counterclockwise direction, as in Figure 5.

Correction of pineal gland activity will cause a rotation of the electron poising curve in a clockwise direction back toward its normal position as seen in Figure 4. Correction of the pineal gland dysfunction may be made by supplying pineal substance, employing the sphenoid spread technique of Goodheart,[12] or by supplying amino acid precursor to melatonin, tryptophan. Following correction of pineal dysfunction, the return of the electron poising curve to its normal long term set point state may necessitate correction of Sp-21/K-27 to return the resting potential of the curve to the mid potential in a similar fashion to what has been previously discussed regarding pituitary drive. The resting potential

in the pineal-deficient patient, however, is most likely shifted up and to the right toward an over-oxidized state, as in Figure 10.

In this paper, and in a previous paper,[6] it has been stated that changes in the long term set points resulted in a pattern in which there is certain right brain-left brain activity present. That is, weak muscles on the right side of the body are affected by right brain activity, and weak muscles on the left side are affected by left brain activity. If the pineal gland is deficient in function, the result will be a change in long term set point activity of the electron poising system as seen by the shift of the curve in a counter-clockwise direction, as in Figure 5. The deficiency of pineal function and melatonin production allows pituitary drive activity to take place in an unbridled fashion. In other words, there will be increased enzyme activity at the cellular level due to increased availability of estrogen and thyroxine. In this state, depolarization and repolarization will respectively cause increased flows of hydrogen ions from the left side of Figures 2 and 3 and electrons from the right side of Figures 2 and 3, increasing and potentially straining the nutrient requirement of the cell.

A deficiency of one or more of the electron poising nutrients has been well discussed by Goodheart[2] in regard to right brain-left brain activity. Goodheart's original findings showed that vitamin C is related to left brain activity, vitamin E is related to right brain activity, vitamin A stimulates cooperation between both brain activities, and so on,

as is summarized in Figure 11. In this discussion we will call vitamins A, C, and E and the minerals copper, manganese and zinc those substances which are necessary for the short term activity (short term set points) of the cell. When there is a pineal deficiency and excessive pituitary drive, this creates increased availability of hydrogen ions (reducing equivalents) via the steroid route and electrons via the thyroid route, and creates a potential depletion of the nutrients which are required for so-called short term electron poising activity.

Patients with pineal gland deficiency and excessive pituitary drive, excessive hormonal (estrogen/thyroid) output, electron poising curve rotated counterclockwise, will demonstrate right brain-left brain patterns where right brain activity affects muscles on the left side of the body and left brain activity affects muscles on the right side of the body. As was previously discussed [3,6] this pattern of right brain affecting muscles on the left side of the body and left brain affecting muscles on the right side of the body, is an indication of the need for the electron poising nutrients (A, C, E, copper, manganese, zinc).

Most often however, there is not an absolute need but a relative need based on increased utilization. Supplying the appropriate nutrient has proven useful, but an alternate, and in most cases, better, approach is to decrease the utilization of these nutrients to a more normal level. This can be done by re-establishing pineal gland function and melatonin inhibition of the excess pituitary drive, thereby causing a

SUMMARY OF RIGHT BRAIN/LEFT BRAIN FACTORS OF THE ELECTRON POISING SYSTEM

(AFTER MORANTZ)

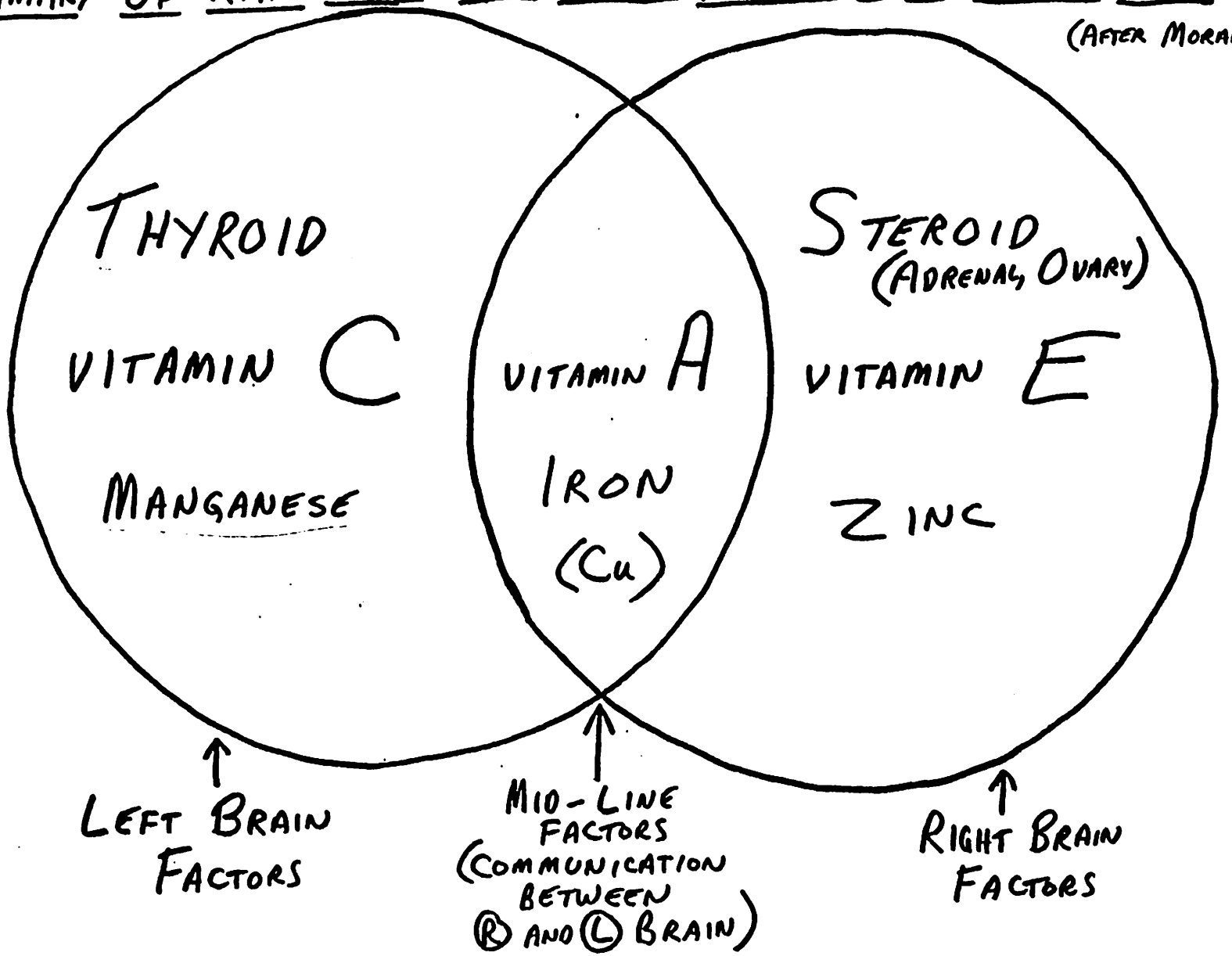


FIG. 11

dampening effect (clockwise rotation toward normal) of the electron poising curve, with the concomitant decrease in estrogen and thyroxine levels and return to normal rates of hydrogen ion and electron fluxes which may be easily maintained by the level of nutrients already present.

When muscle weaknesses on the right side of the body are affected by the left brain activity and muscle weaknesses on the left side of the body are affected by the right brain activity, one can give the appropriate nutrients (A, C, E, copper, manganese, zinc) and observe strengthening of these muscles and neutralization of right brain and left brain activity when these nutrients are given in the proper balance. However, the same strengthening of these muscles and neutralization of right/left brain activity can be achieved by giving pineal, correcting a sphenoid compression fault, and/or by giving of the precursor of the pineal hormone melatonin, tryptophan.

Placing tryptophan in the mouth of a patient who has right brain activity affecting muscles on the left side of the body or left brain activity affecting muscles on the right side of the body will cause an immediate strengthening of all muscles and neutralization of left brain-right brain activity. This is thought to be related to the immediate improvement of pineal gland activity and melatonin production which occurs in the presence of tryptophan. The increased activity of the pineal causes a dampening of the pituitary drive (a clockwise rotation of the electron poising curve) and a decreased demand on the rate of utilization of the electron poising nutrients.

It is now thought that many patients who have previously responded to electron poising nutrients as in such supplements as Poiseplex (VMNutri) or EBA (by Nutri Dyn) may show equal or better responses by supplementation with L-Tryptophan and/or other methods to increase pineal activity (e.g., sphenoid spread, pineal tissue supplementation). Again, following correction of pineal, and rotation of the electron poising curve to its normal position, it may be necessary to perform Sp-21/K-27 activity to bring the resting potential to the mid point potential

THE ANTAGONISM BETWEEN TYROSINE AND TRYPTOPHAN

Tyrosine and tryptophan are two amino acids which are present in the average diet. Tyrosine and tryptophan are particularly important amino acids in that they serve as precursors for specific hormones and specific neurotransmitter substances. It might be noted that phenylalanine may be readily converted by the body into tyrosine, but in this discussion we will not mention phenylalanine for simplicity's sake. When reference is made to tyrosine, please keep in mind that phenylalanine may be supplemented in its place.

In an excellent review article in the April, 1982, Scientific American by Richard Wurtman, entitled, "Nutrients that Modify Brain Function,"[13] Dr. Wurtman summarizes the research regarding tryptophan and tyrosine which has been completed in recent years. Both tyrosine and tryptophan, as well as a number of other amino acids, are able to cross the blood-brain barrier, making themselves available for transformation into neurotransmitters. There is a competition

between tyrosine and tryptophan for transport across the blood-brain barrier. Both tyrosine and tryptophan (and several other amino acids - phenylalanine, leucine, isoleucine, and valine) compete for positions on the same carrier molecule which enables them to cross the blood-brain barrier. This carrier molecule for transport of tyrosine and tryptophan across the blood-brain carrier has a limited number of receptors -- as if it were a bus with only so many seats and tyrosine and tryptophan compete with each other for those few seats on the bus across the blood-brain barrier.

The limiting factor on the amount of tyrosine and/or tryptophan which can be transported across the blood-brain barrier is the plasma concentration of each amino acid. The higher the plasma concentration of a given amino acid, the more of it will be transported across the blood-brain barrier. Therefore,the relative plasma concentrations of tyrosine and tryptophan determine the relative amounts of each that will be transported from the blood into the brain.

The plasma levels of tyrosine and tryptophan depend on several factors : (1) the amount of the amino acid in the diet. This is a simple concept. Most natural sources of protein contain both tyrosine and tryptophan. Poor protein sources may be deficient in tryptophan, but in any case, it is a simple thing to supplement the diet with an amino acid.

(2) The amount of other amino acids in the diet. The amino acids tyrosine, phenylalanine, leucine, isoleucine, and valine (all large, neutral amino acids) all compete with each other and as a group with tryptophan for "seats on the bus"

across the blood-brain barrier. These five large neutral amino acids circulate freely in the blood stream. Tryptophan, on the other hand, is also a large, neutral amino acid, but it circulates in the blood bound to a protein (albumin) carrier molecule. Consequently, factors which affect the free tyrosine levels (and the other four free amino acids mentioned) in the plasma are different from factors which affect the bound tryptophan molecules. Increasing the plasma levels of these five large neutral amino acids increases their transport across the blood-brain barrier while tryptophan transport into the brain is sacrificed . Decreasing the plasma concentrations of these five amino acids makes available a greater relative amount of tryptophan for transport into the brain. Anything which increases plasma tyrosine will increase tyrosine transport and decrease tryptophan transport into the brain. Anything that lowers plasma tyrosine will decrease tyrosine transport and increase tryptophan transport into the brain.

(3) the relative proportions of carbohydrate and protein in the diet. One of the most important factors affecting the plasma levels of tyrosine (and the other free large neutral amino acids) is the level of insulin in the blood. Insulin , of course, increases following ingestion of any kind of carbohydrate, especially concentrated, refined carbohydrates. Insulin reduces the plasma levels of tyrosine (and the other four) by causing them to be transported into muscle cells. A high carbohydrate meal, therefore, results in a decrease in plasma levels of tyrosine (and the other four) and favors

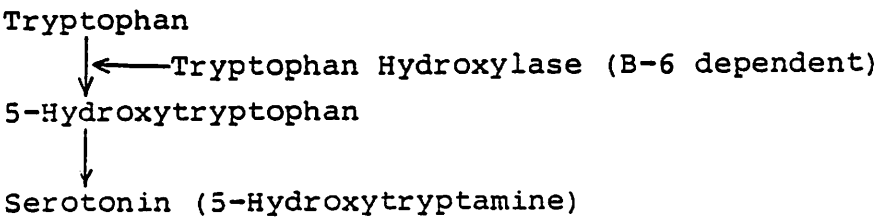
the transport of tryptophan across the blood-brain barrier.

Interestingly, when tryptophan enters the brain, it is converted to the neurotransmitter, serotonin. Serotonin's presence, among other things to be discussed later, causes an effect on the appetite centers of the brain (in the hypothalamus) which stimulates the desire for protein. This negative feedback loop is one way in which the body regulates adequate balance of carbohydrate and protein in the diet.

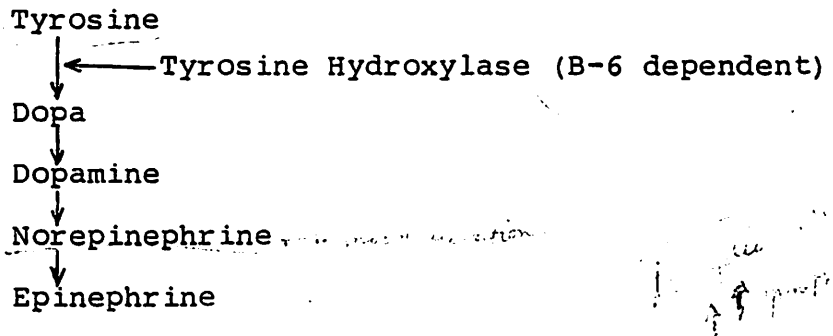
Since tryptophan is found in relatively low concentrations in protein sources compared with tyrosine (and the other four), diets high in protein and low in carbohydrate make available proportionately much more tyrosine than tryptophan for transport across the blood-brain barrier. High protein diets, therefore, favor tyrosine transport into the brain. This decreases the activity of serotonin-dependent pathways which stimulate appetite desire for protein and causes the person to increase the desire for carbohydrate, and the negative feedback cycle comes full circle.

TYROSINE AND TRYPTOPHAN AS NEUROTRANSMITTER PRECURSORS

The importance of tyrosine and tryptophan entering the brain cannot be over-emphasized. Tyrosine is the precursor for the neurotransmitter, norepinephrine. Tryptophan is the precursor for the neurotransmitter, serotonin. Tryptophan is converted into serotonin in the following manner:



Tyrosine is converted into norepinephrine and other neurotransmitters in the following way :



Norepinephrine and serotonin have opposite effects in the nervous system. Norepinephrine is generally associated with activation of the nervous system. Neurons which are associated with awakening, mood elevation, and general arousal in the nervous system have norepinephrine as their neurotransmitter. It has often been stated that excessive refined and concentrated carbohydrate intake is associated with negative mood swings, especially depression and anger. The reason which has always been used to explain this phenomenon has been the effect on nervous system tissue of a hyperinsulinism-induced hypoglycemia with a resulting "short-circuiting" of nerve cells in the brain. In light of what is now known about carbohydrate ingestion and insulin's effect on lowering tyrosine levels, an alternate explanation of these negative mood swings is available. That is, increased insulin secretion in response to carbohydrate ingestion lowers the plasma levels of tyrosine, making tyrosine unavailable for transport into the brain and conversion into norepinephrine. This restriction of norepinephrine precursors can interfere with the normal mood-elevating effects of the norepinephrine-releasing pathways and result in the

negative mood swings even if the blood sugar is maintained within normal limits.

Serotonin, on the other hand, is associated with sedation of the nervous system. Neuron pathways which use serotonin as their neurotransmitter are involved with turning off the nervous system for sleep, controlling agitation and anxiety, and so on.

In general, if a person is down, norepinephrine-releasing pathways will pick him up. And conversely, if a person is up, serotonin-releasing pathways will bring him down. Depression is associated with a deficiency of function in norepinephrine-containing neural pathways. Insomnia or excessive nervousness are associated with a deficiency of serotonin-containing neural pathways.

One can readily see how there must be a balance between norepinephrine-releasing pathways and serotonin-releasing pathways for normal balanced nervous system function. Increasing tyrosine in the brain enhances the function of norepinephrine-releasing neurons; increasing tryptophan in the brain enhances the function of serotonin-releasing neurons. It is by no mistake that the body has built into it negative feedback control loops to deal with the balance of tyrosine and tryptophan entering the brain, thereby keeping a balance of function between the neuron pathways of the two neurotransmitters.

TYROSINE AND TRYPTOPHAN AS HORMONE PRECURSORS

Tyrosine combines with iodine in the tyroid gland to produce mono-iodotyrosine and di-iodotyrosine, which

further combine to produce the thyroid hormones tri-iodotyrosine (T 3) and thyroxine (T 4). In other words, the amino acid tyrosine is the precursor for thyroid hormone.

Tyrosine is also the precursor for epinephrine, as already mentioned. But in the previous context, epinephrine was referred to in its neurotransmitter capacity. Epinephrine also has major hormonal effects as it circulates through the body following release from the chromafin cells of the adrenal medulla and elsewhere.

Recall the effects of epinephrine on the electron poising system. Sympathetic nervous system dominance through the actions of epinephrine has its effects on increasing the rate of metabolism at the cellular level by increasing the cell's response to depolarization. Epinephrine acting as a hormone is associated with increasing metabolic rate.

Thyroxine, through its effects of increasing availability of electrons, increases metabolic rate by increasing rates of oxidation at the cellular level. Both epinephrine and thyroxine increase metabolic activity. Both have tyrosine as their precursor. Norepinephrine is a major activating neurotransmitter in the nervous system. Norepinephrine has as its precursor tyrosine. Activation (or increased function) in both the body chemistry (endocrine system) and the nervous system is dependent, fundamentally, on one amino acid - tyrosine.

Serotonin, circulating in the body as a hormone, affects cellular function with a dampening effect. Serotonin, you will recall, diminishes the response of the cell to

depolarization. The presence of serotonin decreases the activity of the electron poising system at the cellular level with the net effect of slowing the cell's metabolic rate.

Melatonin, the hormone of the pineal gland, has its effects on body chemistry by inhibiting pituitary drive. Melatonin's presence slows metabolic rate by slowing pituitary drive which results in decreased levels of endocrine system activity. Both serotonin (acting as a hormone) and melatonin decrease metabolic rate. Both serotonin and melatonin have the same precursor - tryptophan.

Serotonin is a major neurotransmitter associated with sedation or slowing of function in the nervous system. Sedation or decreased function in both the body chemistry (endocrine system) and in the nervous system is dependent, fundamentally, on one amino acid - tryptophan.

Throughout the body, in both chemical (endocrine) and neurological contexts, tyrosine is associated with increasing metabolic rate and function, and tryptophan is associated with decreasing metabolic rate and function. The antagonism between tyrosine and tryptophan takes on monumental importance in this regard. Through many complexities and in many ways, a simple rule holds true : Tyrosine increases function and tryptophan decreases function.

Application of these facts yields a major, fundamental tool for manipulating body chemistry and nervous system function in a parallel fashion. The use of tyrosine and tryptophan as antagonistic and counter-balancing agents -- in the brain as neurotransmitter precursors, and in the endocrine glands as

hormone precursors, affords an unequaled tool in the understanding and treating of structural, chemical, and psychological factors of our patients.

CLINICAL APPLICATIONS

Our findings have correlated the needs for tryptophan and tyrosine with the concepts of electron poising and right brain-left brain activity. As previously mentioned, the need for tyrosine will be seen when there is right brain activity affecting muscles on the right side of the body and left brain activity affecting muscles on the left side of the body. This patient will have an electron poising curve similar to that in Figure 6, where the curve is rotated clockwise.

The patient who requires tryptophan will be seen to have left brain activity affecting muscles on the right side of the body and right brain activity affecting muscles on the left side of the body, as was also previously discussed. The patient who requires tryptophan will have an electron poising curve as in Figure 5, where the curve is rotated counterclockwise.

The utilization of these two fundamental amino acids in supplement form, combined with manipulating the relative dietary proportions of carbohydrate and protein, are tools for the clinician which will oftentimes override other tools, particularly other nutritional approaches which he has previously been using. The use, for example of tryptophan, oftentimes diminishes the need for supplying supplement levels of vitamins A, C, E, copper, manganese, zinc. Some patients, however, may still require tryptophan and these electron poising nutrients.

When we employ the use of tyrosine, we have been generally recommending that it be taken (at least) in the mornings, since it is an activating substance in the nervous system and the endocrine system. Tryptophan has generally been recommended for evening use, prior to the person retiring for the night. It is important to note, again, that the supplementation of these substances must be considered in the light of the relative dietary levels of carbohydrate and protein. Attention must also be paid to the potential need for other nutrients, particularly vitamin B-6 and other factors which are discussed in numerous articles by other authors, particularly in the field of orthomolecular psychiatry.[14]

Pyridoxine (vitamin B-6) in its active form, pyridoxal-5-phosphate, is necessary for the transformation of tyrosine into dopa and, subsequently, to norepinephrine. (See page 38.) Pyridoxal-5-phosphate is also necessary for the transformation of tryptophan into serotonin. (See page 37 .) Therefore, in some patients who require vitamin B-6 supplementation, such as any woman taking oral contraceptives, the muscle-right brain-left brain patterns associated with tyrosine (right brain affecting right-sided muscles/ left brain affecting left-sided muscles) and tryptophan (right brain affecting left-sided muscles / left brain affecting right-sided muscles) may be neutralized by the use of vitamin B-6. In other words, in some patients, the use of vitamin B-6 is a more critical factor than even the use of tyrosine and/or tryptophan, and B-6 supplementation may override the need for supplementation of

either or both of these amino acids. Of course, a patient may require supplementation of B-6 and tyrosine and/or tryptophan, in conjunction with changing dietary proportions of protein and carbohydrate.

CONCLUSIONS

The opportunity to neutralize recurrent left brain-right brain patterns, and therefore, recurrent switching patterns, and therefore, recurrent emotional, mental, endocrinological and other functional patterns, by the simple supplementation of tyrosine and/or tryptophan expands our capacity to deal with patients' problems on a most fundamental level. Before employing other biochemical principles in the balancing of a patient's chemical or nutritional side of the health triangle, one must first ascertain that there is a general balance in the nervous and endocrine systems, based on the availability of tyrosine and tryptophan (and B-6). Correction of potential imbalances of tyrosine and tryptophan levels and their neurotransmitter and hormonal end-products is necessary before embarking on other biochemical manipulation via nutritional supplementation. Correlation of muscle testing with right brain and left brain activity becomes of primary importance in our examination of the patients. It is not enough to merely note the occurrence of right brain and left brain activity, but such activity must be correlated with which side of the body is affected by which brain activity.

In this paper, no mention has been made of the right brain-left brain patterns associated with iron deficiency or folic acid deficiency. These patterns have been discussed

elsewhere[6] and their presence potentially complicates the interpretation of right brain-left brain patterns discussed herein. Generally speaking, suspect an iron requirement first and a folic acid deficiency second when encountering complicated and mixed patterns of right brain-left brain involvement.

The use of tyrosine and tryptophan (and possibly B-6) is of such fundamental importance that the needs for these substances must be evaluated and corrected prior to embarking on other nutritional therapies. Many other nutritional indications will vanish when these substances are supplied as discussed. It is therefore urged that left brain-right brain activity be investigated in all patients the first time they are examined on a chemical basis and the implications of the relative needs for tyrosine and tryptophan (and B-6) be given a priority in the chemical treatment of the patient.

It must be noted that some patients respond to both tyrosine and tryptophan at various times, and it is for this reason that we sometimes use tyrosine supplementation in the morning and tryptophan supplementation in the evening. It is also worth noting that vitamin B-6 is necessary for the activation of both tyrosine and tryptophan into their end products, and will sometimes be found to be the missing link in patients who show a need for both tyrosine and tryptophan. In these patients, the ensalivation of vitamin B-6 will cause not only an increase in strength of the anterior scalene, which is its classical muscle relationship, but will cause a

generalized strengthening of many muscles in the body and neutralization of right brain-left brain activity throughout the system.

The appropriate application of Sp-21/K-27 technique is a necessary adjunct to the use of tyrosine and tryptophan. In the past, Sp-21/K-27 has been employed only after numerous other AK factors have been corrected. It is now seen that the timing or placement of Sp-21/K-27 in the treatment process is a critical factor for the continuation of the "unraveling" process as we attempt to uncover hidden problems in our patients.

The procedures in this paper are an attempt to identify a unified approach in the investigation and treatment of our patients. It is now possible, using the tool of muscle testing and applied kinesiology, to interpret and correlate fundamental microscopic biochemical and neurochemical processes at the molecular cell levels in terms of macroscopic levels of nervous system function as manifested in the body language elements of muscle testing and right brain-left brain activity. Again we are impressed by the organization of the human body in a fashion which is "intricately simple and simply intricate," and by the abilities afforded us to penetrate and translate these relationships for the improved health care of our patients.

REFERENCES

[1]Goodheart, George J., Applied Kinesiology, privately published, 1964.

[2]Goodheart, George J., The Cranial Sacral and Nutritional Reflexes and Their Relationship to Muscle Balancing, privately published, Detroit, 1968.

[3]Goodheart, George J., Applied Kinesiology 1980 Research Manual, privately published, Detroit, 1980.

[4]Isaacs, James P. & John C. Lamb, "A Précis on Cellular Electron Poising, Ergodization, and Molecular Quantization," presented at Conference on Trace Substances in Environmental Health, Volume 8, pp. 313-321, University of Missouri, 1974.

[5]Isaacs, James P., John C. Lamb, William R. Minnich, William R. Brewster, Jr., and George B. Schreiber, "Trace Metals, Vitamins, and Hormones in the Long Term Treatment of Coronary Atherosclerotic Heart Disease," Conference on Trace Substances in Environmental Health, Volume 5, pp. 313-327, University of Missouri, 1970.

[6]Schmitt, Walter H., Jr., "Clinical Observations Regarding Dorsal versus Palmer Therapy Localization," in ICAK Collected Papers, winter, 1981, pp 271-292.

[7]Schmitt, Walter H., Jr., "Sp-21 and K-27 Technique for Changing Body Chemistry : A Refinement of How Long to Do It," in ICAK Collected Papers, winter, 1981, pp. 293-302.

[8]Goodheart, George J., Applied Kinesiology 1978 Research Manual, privately published, Detroit, 1978.

[9]Schmitt, Walter H., Jr., Common Glandular Dysfunctions in the General Practice, privately published, Chapel Hill, N.C., 1981.

[10]Schmitt, Walter H., Jr., "Antronex - Another Tool for Finding Hidden Problems," in ICAK Collected Papers, summer, 1982, pp. 261-264.

[11]Wurtman, Richard J., "The Pineal and Endocrine Function," Hospital Practice, January, 1969, pp. 32-37.

[12]Goodheart, George J., Applied Kinesiology 1979 Research Manual, privately published, Detroit, 1979.

[13]Wurtman, Richard, "Nutrients that Modify Brain Function," Scientific American, April, 1982.

[14]Prastka, George J., "Neurotransmitter Theory and Orthomolecular Practice," Orthomolecular Psychiatry, 7:2, 1978, pp. 86-93.

POSTERIOR ACETABULAR SYNDROME

Paul T. Sprieser, B.S., D.C.

Abstract: This is a clinical observation of a pattern of symptoms that are due to a combination of structural and muscular problems that occur in combination.

Patient (usually women) would present themselves with a variety of complaints that centered around the sacroiliac joint or the posterior acetabular region.

Most of these patients are frequently active playing sports that cause a great deal of stress to the lower extremities and pelvic region and feet.

Symptoms most often consisted of pain in the sacroiliac joint, hip pain that centered around the posterior region of the acetabulum. The pain might be found during activity of joint and would be described as dull or odd feeling. Pain sometimes would be felt in joint after being seated for a while, upon arising and would stop after taking a few steps.

Clinical Findings:

1. Muscle testing and therapy localization will show the presence of a pronated foot on the involved side, with weakness of the Anterior Tibial. Presence of tenderness near posterior inferior medial malleolus on involved side.

2. The involved hip side will be positive to localization over the hip joint. Testing of the hip external rotator muscle will show weakness of the Piriformis on that side.

Clinical Findings: (continued)

3. Challenge to the hip from anterior to posterior will be negative. Challenging the hip joint from the posterior to anterior will cause a strong indicator muscle to weaken. You should also challenge superior to inferior which is usually also involved. Also challenge with respiratory phase and correct into direction that did not weaken.

4. Also accompaing this syndrome will be the presence of a Cat. # 2 on the involved hip side in about 75% of the cases.

5. Usually the presence of the open I.C.V. will also be noted.

Statistics:

Our study consisted of 100 cases 71 women and 29 men. Women in the study ranged from age 15 to 60 years of age. The men in the study range from 17 to 65 years of age.

Observations:

1. Many of these patients were just starting a new sport for general conditioning or weight reduction exercise programs.

2. This particular syndrome can be found in many different sports related activities. However, the most commonly found were, racquet ball, tennis, arobic dancing and jogging.

Bibliography:

1. Gray Arthur C., M.D., Anatomy of the Human Body, Lea & Feibger Publisher, Phil. 1965.

2. Kendall Henry, Kendall Florence, Wadsworth Gladys-Muscle Testing and Function, Second Edition , Williams & Wilkins Co. Publisher, Baltimore, M.D. 1976.

3. Walther David, S. D.C.-Applied Kinesiology Volume 1, Basic Procedures and Muscle Testing, Systems D. C. Pueblo Colorado, 1981.

YAW-2 MUSCULAR PATTERN

Paul T. Sprieser, B.S., D.C.

Abstract: The observation of the presence of the yaw-2 pattern in patients, and the muscular pattern that allows it to occur.

For the past few years we have know about the PRY-T Technique, due to the observations of Dr. George Goodheart. The yaw-2 is one of the basic structural faults that we look for in all new patients, as well as our regular ones.

I was interested in trying to see what was the possible origin of this problem.

In studing the work shop manuals and Dr. David Walther's text, I found only the discription and correction ofthe pattern but no muscular aspect of this fault. Yet this sturctural fault cannot exist without muscular imbalances, and since some re-currence may happen in the course of treatment, I wondered weather the muscular aspect should be researched out and also corrected.

This paper will deal with the yaw-2 pattern of pelvic shoulder torque. My study consisted of 53 patients with recurrence of the yaw-2 pattern, 22 men and 31 women.

Methods:

1. First patients were observed from anterior to posterior and posterior to anterior to see if the yaw-2 pattern was observable.

Methods: (continued)

2. The patient was challanged with block placed with patient supine first under P.S.S. and under opposite shoulder on the posterior aspect. (Remembering the involved side or side of correction is the opposite side of the hip on the block.)

3. Patient was also checked in prone to verify the supine findings. Therapy localization to hip on the block neutralized the weakened indicator muscle.

MUSCULAR IMBALANCES:

1. Muscle testing of the Latissimus Dorsi on the positive yaw-2 side would always show weakness allowing the shoulder to rotate foward on that side.

2. Muscle testing of the external abdominal oblique on the side opposite the positive iliac side would always show weakness.

Procedures:

1. Correction of the muscular imblance was done first to see if this would correct the yaw-2 structural pattern.

2. Correction of the structural pattern of yaw-2 was then done. Followed by muscle testing of the weakned muscles to see if this would correct the muscular weakness.

3. These procedures were carried out on patients that had showed recurrence of the yaw-2 pattern on follow up office visits.

Findings:

1. Correction of muscular weakness did not correct yaw-2 structural pattern.

2. Correction of the yaw-2 structural pattern did not correct the muscular weakness.

3. Where patient showed recidivism for the yaw-2 pattern it would be corrected by making both mechanical and muscular corrections.

4. In right and left brain Holographic Memory the correction had to be made by leaving patient prone on the blocks in positive test position and tapping on the lumbosacral junction and the dorsalcervical junction during phase of brain activity that did not cause weakness.

Conclusions:

1. We should not forget the fact that Dr. Goodheart stated "That muscle moves bone and bone does not move muscle".

2. When making the yaw-2 correction we should correct the muscular component along with the mechanical component to prevent recidivism.

Bibliography:

1. Gray Arthur C., M.D. Anatomy of the Human Body, Lea & Faibger Publisher, Phil, 1965.

2. Kendall Henry ,P.T., Kendall Florence, P.T., Wadsworth Galdys, P.T., Maucle Testing and Function, Second Edition, Williams & Wilkins Co. Publisher, Baltimore, M.D. 1976.

3. Walther David, S., D.C.-Applied Kinesiology Volume 1, Basic Procedures and Muscle Testing, Systems D.C. Pueblo CO, 1981.

4. Wells Katharine F., Ph..D. Kinesiilogy, W.B. Sanders Co. Publisher, Phil., 1961.

PANCREATIC ENZYNE DEFICIENCY

JOHN O. STOUTENBURG, D.C.

In Applied Kinesiology we are continually striving for better mehtods of making a diagnosis. For several years we have had a method of muscle testing to determine deficiency of hydrochloric acid which has been very reliable, but we have not had a muscle test to determine pancreatic enzyne deficiency. This paper will attempt to remedy that situation.

There has been a method used by some Applied Kinesiologists where they contact the right epigastric area of the patient while testing any strong muscle, a weakness of the muscle indicating enzyne deficiency. This test has not been accepted fully in AK circles. In the past we have also based our diagnosis on the symptom picture which is not always reliable and you can be lead astray by symptoms quite frequently.

The muscles associated with the pancreas are the latissimus dorsi which are the ones generally used in connection with blood sugar problems. In diagnosing a hydrochloric acid deficiency which envolves the stomach, we use the pectoralis major clavicular muscles[1] which are the muscles associated with the stomach. When we find bilateral weakness of the pectoralis major clavicular muscle, we assume that there is a hydrochloric acid deficiency. Administering some tablets of betaine hydrochloride strengthens the pectoralis major clavicular muscle, therefore, alleviating the hydrochloric acid deficiency. That being true, then why shouldn't the latissimus dorsi respond in the same way as to a pancreatic enzyne deficiency? I have found that when we find a bilateral weakness of the latissimus dorsi muscle the administration of pancreatic enzynes immediately strengthens the muscles involved. I have also, at the same time, been checking the reflex area in the right epigastrium and have found that there is a definite correlation between pancreatic enzyne

deficiency and activity of this reflex area. In testing the latissimus dorsi for this pancreatic enzyne deficiency, it is done by testing both the latissimus dorsi muscles at the same time. Another benefit derived from the supplimentation of enzynes has been the gradual correction of an anterior mid-thoracic subluxation which has been a problem in many patients with blood sugar problems. They seem to have responded with the use of pancreatic enzynes. I feel that this specific muscle test for pancreatic enzyne deficiency will enhance our treatment of patients in general.

Bibliography

1. Goodheart - Research manual 1970 privately published

****INDEX****