Asia-Pacific Chiropractic Journal

CHIROPRACTICHISTORY

A history of professional Applied Kinesiology around the world (Part 2)

Scott Cuthbert and Clive Lindley-Jones

With contributions from Eugene Charles, Rudolf Meierhöfer, Richard Meldener,

Abstract: In this history of the growth of Professional Applied Kinesiology (PAK) and the International College of Applied Kinesiology around the world and throughout the healing professions in Part II, thirteen contributing authors and teachers of this chiropractic technique tell the story of PAK's growth on each of the continents of the world and its penetration into allied natural health care fields, presenting the detailed, colorful story of the permeation of AK manual muscle testing (MMT) methods and philosophy into the daily practice of hundreds of thousands and potentially millions of clinicians. Illustrated throughout with historical pictures covering over 5 decades, this is the first comprehensive history of AK around the world.

Indexing Terms: Chiropractic, Applied kinesiology, Goodheart, AK, chiropractic history, Manual Muscle Testing.

See Part 1: Cuthbert S, Lindley-Jones C, and contributors. A history of professional *Applied Kinesiology* around the world (Part I). Asia-Pacific Chiropr J. 2021;2.2. URL https://www.apcj.net/papers-issue-2-2/#CuthbertetalPAK1

Prologue

It has now been estimated (by taking a census of the number of students taught by Kinesiology teachers around the world) that the MMT and the basic factors of therapy introduced by Dr. Goodheart for physicians in the early 1960s is now practiced by over 1 million people around the world. (1)

One of the major reasons PAK has spread across the world is that the MMT is a functional diagnostic tool that can be used by most of the clinicians in complementary and alternative medicine as well as traditional allopathic medicine. Part II of this paper describes how the spread of this chiropractic technique throughout the CAM world has occurred.

'... this long-form scholarship provides Part 2 of the associated paper exploring the more recent history of the Applied Kinesiology (AK) technique and its global expansion.'

Introduction

Goodheart's research was published yearly from 1964-1998 in research manuals, articles, chapters in books, monthly research tapes, and more. A bibliography of his published work is available from the *International College of Applied Kinesiology*, the organization Goodheart founded in 1976. (2) In his seminal work (1992), the chiropractic historian Dr. Joseph Keating (3) applauded the ICAK:

'Unfortunately few chiropractic membership organizations in the U.S. can claim to have been founded or to function primarily for scholarly or scientific purposes. (The Association for the History of Chiropractic (AHC) and the International College of Applied Kinesiology (ICAK) are exemplary of these few.) … There are few organizations of field doctors which can make a similar claim.'

Many members of ICAK have done great work to further the standing of chiropractic in the world, but perhaps no history of AK in Chiropractic would be complete without a mention of Dr. Kathy Conable.

Not only does she run a busy practice and is a professor at Logan University, Missouri, USA, teaching undergraduate chiropractic students, she is also one of the longest serving members, on all the boards, who has in the service of AK crisscrossed the world for so many years, to nearly all the International conferences, more recently as a long serving President of the I*nternational Board of Examiners*.

She brings both an intimate knowledge of the lived history of AK from its early days along with an academic's rigor, respect for details, good administration and sound practice.

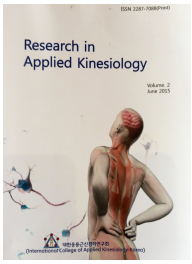
Dr. Katherine Conable

The first book to describe the value of AK to other professions, '*AK and the Stomatognathic System*', was authored by Gelb, a dentist, and Goodheart in 1977. (4)

Goodheart set the peer-review trend for AK by publishing a discussion of dentistry and AK in 1976. (5) Scopp published the first research paper discussing the AK approach to a functional organic disorder with allergy testing in 1979. (6)

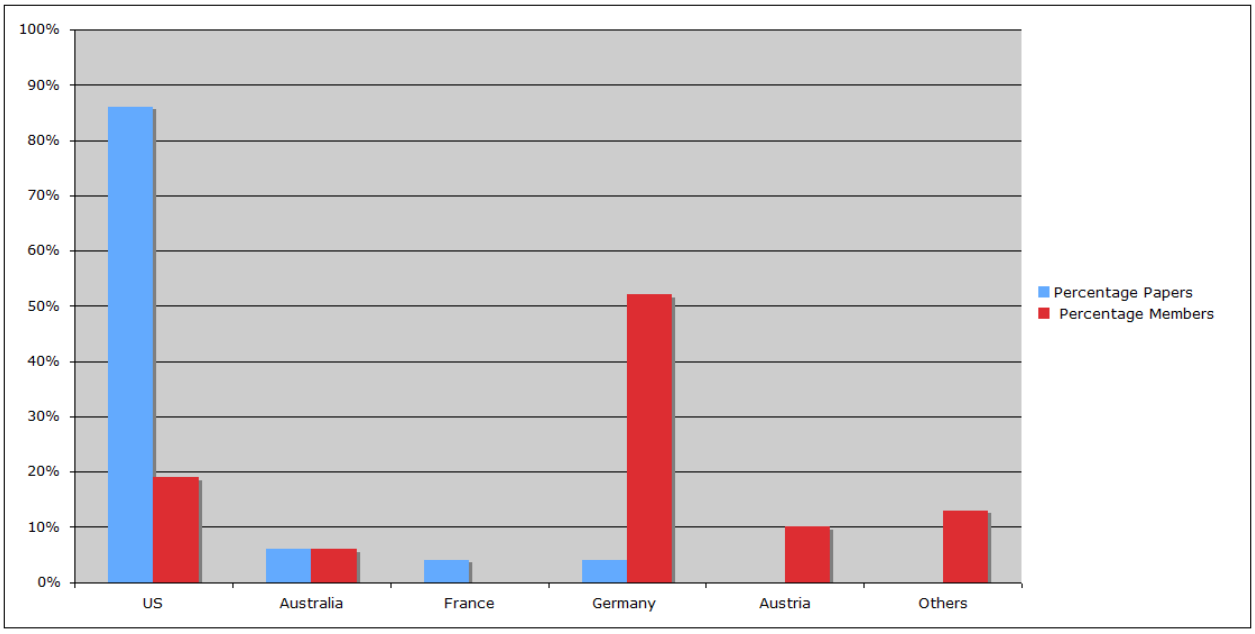
There are now over 100 papers published in peer-reviewed journals on the methods and outcomes of AK. (7. 8) Few chiropractic therapeutic methods have been investigated or written about as extensively as AK. There have been 40 separate books published about AK methods since 1964.

In support of the ICAK's common purpose of increasing access to AK, and continuing further development, Dr. Goodheart encouraged all ICAK members to '*promote research ...* ' This was always an important point for the leadership of ICAK, and Dr. Goodheart was very happy that within ICAK, there was an ongoing dedication of time and resources to research. This has been documented in the 'AK Compendium of Research'. (7)



The *Applied Kinesiology Research and Literature Compendium 2019* provides a theoretic foundation for understanding the clinical mechanisms that link *Applied Kinesiology* manual muscle testing methods with human health and disease. The functional mechanisms of manual muscle testing are explored, and links between the status of the muscular and nervous systems are demonstrated.

Country	US	Australia	France	Germany	Austria	Total
No of Papers	43	3	2	2	0	50
Percentage	86%	6%	4%	4%		100%
No of Members	671	205		1826	335	3500
Percentage	19%	6%		52%	10%	87%



Percentage of quality research papers published according to ICAK Chapters Around the World

This enlarged edition of the AKRLC encompasses the following topics:

- Research supporting the reliability of the manual muscle test
- Research correlating MMT outcomes with other instruments measuring muscle function
- Research related to treatment effects using AK methods: clinical series and case reports
- Research studies examining the clinical relevance, predictive validity and accuracy of MMT
- Research support for therapy localization method in AK

The Compendium presents an exhaustive review of the research literature about AK's clinical methods in peer-reviewed scientific journals, that *summum bonum* of 21st century research validity. Publishing this research is a high priority as it helps protect the future of AK. These studies include research from chiropractic, biomedical, acupuncture, physiotherapy, nutritional, craniosacral and osteopathic literature and cover the diagnosis, treatment, reliability, and

outcome measurements of AK methods. *Applied Kinesiology*'s relevance to neuroimmunology, pediatric, and emotional health is also documented here.

Applied Kinesiology methods now enjoy the highest public visibility and patient utilization rate in its history. (1) Part of its new status in the health care marketplace is the result of various studies demonstrating the effectiveness and patient satisfaction using AK, CAM, and chiropractic adjustment procedures in the management of pain, functional organic ('Type O') disorders, and improvement in quality of life for patients of all ages. The somatovisceral aspects of chiropractic and osteopathic treatment have often been given short shrift by the research community, and research papers included in the *Applied Kinesiology Research and Literature Compendium* show how A*pplied Kinesiolog*y may make unique contributions to the general health of the public.

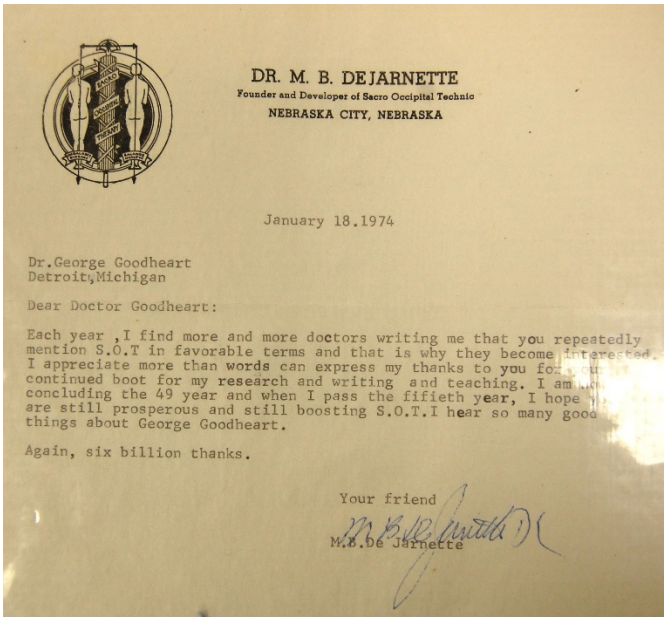
As AK professionals continue their emergence into mainstream health care and as the opportunity for multidisciplinary health care partnerships expand around the world, the importance of research exploring the role of *Applied Kinesiology* therapy in the management of spinal and systemic health disorders will increase. Understanding the published research allows us to grow, learn and modify our technique and diagnostic methods to match our discoveries and to stay current in the scientific community worldwide.

McDowall observed (9) that the great majority of methodologically useful AK Research papers (from 1974- 2007) have come from the United States.

It is true that the evidence that supports *Applied Kinesiology* has some holes in it. However, the suggestion that *Applied Kinesiology* methodologies not be used because of these vacancies in the scientific support would be to deprive thousands of patients of their chance to heal. All of us use electricity and gravity even though we have gaps in our understanding of how they work.

Applied Kinesiology, when practiced by a physician who is adequately trained and with a mild degree of prudence, is virtually risk-free, and it possesses the potential for great help.

Major Bertrand DeJarnette, DO, DC Founder of Sacro-Occipital Technique



DR. M. B. DEJARNETTE
Founder and Developer of Sacro Occipital Technic
NEBRASKA CITY, NEBRASKA

January 18.1974

Dr.George Goodheart
Detroit,Michigan

Dear Doctor Goodheart:

Each year ,I find more and more doctors writing me that you repeatedly mention S.O.T in favorable terms and that is why they become interested. I appreciate more than words can express my thanks to you for your continued boot for my research and writing and teaching. I am now concluding the 49 year and when I pass the fifieth year, I hope you are still prosperous and still boosting S.O.T.I hear so many good things about George Goodheart.

Again, six billion thanks.

Your friend
M.B.DeJarnette

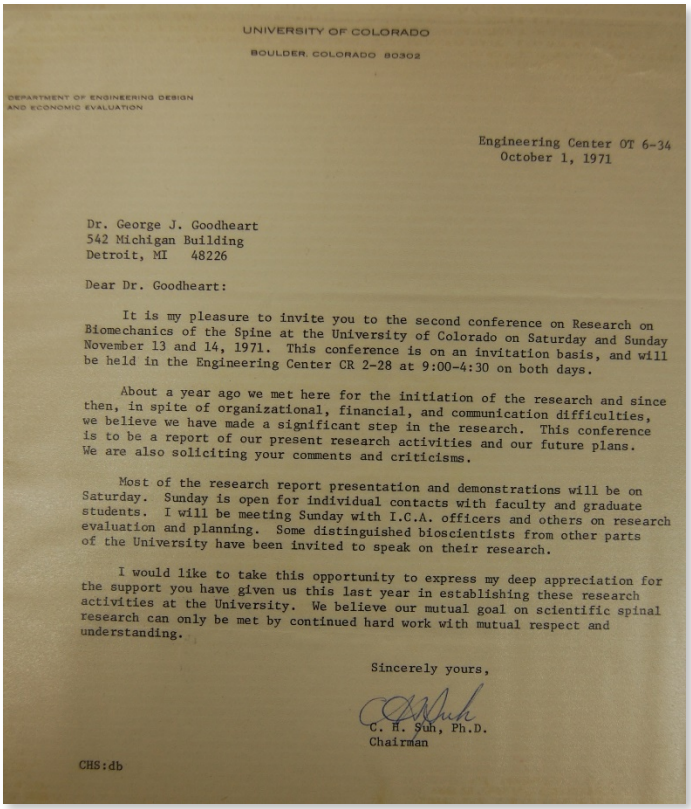
After suffering a severe injury (an explosion), DeJarnette was treated by an osteopathy and later enrolled in the Dearborn College of Osteopathy in Elgin, Illinois. While there he met and studied with William Garner Sutherland, the founder of cranial osteopathy. After graduation he returned to his home

state of Nebraska, where he received chiropractic care from the head of the Nebraska College of Chiropractic, and enrolled in this college as well, from which he graduated in 1924 at the age of 25.

Dr. Goodheart wrote and spoke about Dr. DeJarnette throughout his career with special admiration (particularly about DeJarnette's cranial, pelvic, and somato-autonomic- visceral discoveries) and called him a '*five-star general*' of chiropractic research. Dr. Goodheart's father was also a student of DeJarnette. The influence of both doctors upon the other's work is evident.

C.H. Suh, PhD

Dr. Suh has done essential research for the chiropractic profession and invited Dr. Goodheart to the second Research on Biomechanics of the Spine at the National Institutes of Health (NIH).



UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

DEPARTMENT OF ENGINEERING DESIGN
AND ECONOMIC EVALUATION

Engineering Center OT 6-34
October 1, 1971

Dr. George J. Goodheart
542 Michigan Building
Detroit, MI 48226

Dear Dr. Goodheart:

It is my pleasure to invite you to the second conference on Research on Biomechanics of the Spine at the University of Colorado on Saturday and Sunday November 13 and 14, 1971. This conference is on an invitation basis, and will be held in the Engineering Center CR 2-28 at 9:00-4:30 on both days.

About a year ago we met here for the initiation of the research and since then, in spite of organizational, financial, and communication difficulties, we believe we have made a significant step in the research. This conference is to be a report of our present research activities and our future plans. We are also soliciting your comments and criticisms.

Most of the research report presentation and demonstrations will be on Saturday. Sunday is open for individual contacts with faculty and graduate students. I will be meeting Sunday with I.C.A. officers and others on research evaluation and planning. Some distinguished bioscientists from other parts of the University have been invited to speak on their research.

I would like to take this opportunity to express my deep appreciation for the support you have given us this last year in establishing these research activities at the University. We believe our mutual goal on scientific spinal research can only be met by continued hard work with mutual respect and understanding.

Sincerely yours,

C. H. Suh, Ph.D.
Chairman

CHS:db

Correspondence from Dr. Suh to Goodheart, 1971

[Ed: The Journal has addressed Dr Suh in depth, See:

Ierano J. Chung-Ha Suh PhD. The Proof of Subluxation. The final report of chiropractic research at the University of Colorado. 2017. Asia-Pac Chiropr J. 2021;2.4. URL apcj.net/papers-issue-2-4/#IeranoSuh

Ebrall P. Looking forward, looking back: The work of Suh. Asia-Pac Chiropr J. 2021;2.4. URL apcj.net/papers-issue-2-4/#EbrallSuh

Drs. George J. Goodheart, Jr. and John Triano confer during the FCER's 1989 research conference.
Triano was an editor of Walther's Applied Kinesiology Volume 1 textbook.

David S. Walther, DC, DIBAK

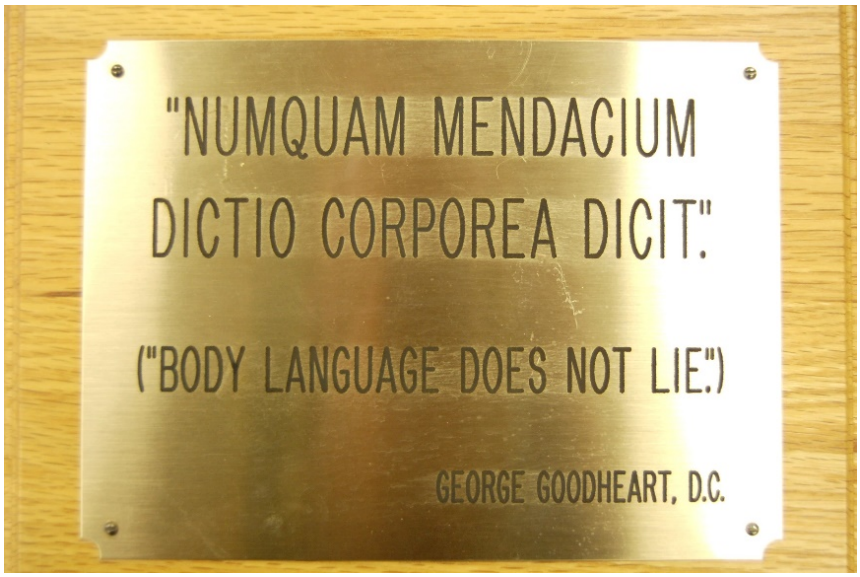
Dr. Walther wrote textbooks and teaching workbooks about Dr. Goodheart's research – these books have been purchased by over ½ of the chiropractic profession alone. Walther subsequently created six textbooks and four chapters for other textbooks spanning numerous disciplines including AK and dentistry, AK and complementary and alternative medicine, as well as educational materials about AK for the general public. These textbooks have been translated into Italian, Japanese, Korean, French, German, and a Chinese translation of his *Applied Kinesiology: Synopsis* is underway. Walther also produced over 60 patient-education pamphlets covering separate clinical subjects that have been sold to clinicians for several decades.

Walther is cited as the primary reference in hundreds of peer-reviewed articles on AK. (10, 11)

Dr. Scott Walker

Dr. Scott Walker (founder of Neuro-Emotional Technique) considered Dr. Goodheart an essential resource. (12, 13, 14) Many variables influence pain behaviors and include the biological, physiological as well as the psychological. After several decades of clinical research by AK physicians, these factors appear to be interrelated and provide a basis for a holistic biopsychosocial approach to the management of pain in a patient-centered approach to care. It is only with the appropriate inclusion of mind-body approaches to management that the full impact of pain and disease may be addressed. (12)

Dr. Scott Walker with Dr. Goodheart



Goodheart Maxim posted in his clinic:
"Body Language Does Not Lie"

A recent summary discusses the importance of '*The Goodheart Effect*' upon the chiropractic profession and principle: (15)

> '*Goodheart's AK technique offers an important diagnostic tool to supplement those already in place. In considering how acupuncturists focus upon meridians, physiotherapists upon rehabilitative exercise, naturopaths upon nutrition, and chiropractors themselves may in some instances devote their attention to the articulations, Applied Kinesiology does not overrule the concept of subluxations but rather implies that subluxations may be attributed to areas in addition to the spine. This allows for an integrative model of chiropractic healthcare to be developed:*
>
> - *It frees the profession from having to limit the concept of subluxations strictly to the spine or to joint aberrations.*
> - *It helps to overcome popular conceptual limitations of chiropractors as merely practitioners who administer only high-velocity thrusts.*
> - *It accommodates the application of physical modalities outside of the spine and, as such, invites closer collaborations of chiropractors with osteopaths, dentists, physiotherapists, massage therapists, physiatrists, and acupuncturists.*
>
> *By returning the focus to neurological imbalance, it immediately allows such major determinants of health as nutrition and stress to become integrated with the clinician's central tenet and message. No longer do nutrition and emotional elements appear as adjunct (and possibly alien) concepts which are difficult to rationalize with the more traditional chiropractic concepts of subluxation.*'

Applied Kinesiology and Osteopathy

Osteopathy has been defined as '*a comprehensive system of diagnosis and therapeutics based on the interrelationship of anatomy and physiology for the study, prevention and treatment of disease.*' Certainly, no system of diagnosis and treatment can be called comprehensive unless all the body is included.

Dr. Andrew Taylor Still (1828-1917) included the entire body in his thinking. He defined osteopathy as "a science and art including a knowledge of anatomy, physiology, biology, chemistry and pathology." Then he went on to say in his autobiography, '*I expect to continue searching … where I find so much to interest me -in the brain of man with its … spinal cord and sets of nerves, branching off, completing the machinery which controls the telegraphy of life.*'

Dr. William Garner Sutherland (1873-1954) was an avid osteopathic student of Dr. Still and followed his lead. He further investigated the cranial and cranio-sacral areas, which were picked up by Dr. Goodheart's father (also an osteopath) and Dr. Goodheart himself, and this area of diagnosis and treatment has been deeply influential within *Applied Kinesiology*.

Osteopathy has had a different development outside the United States than inside.

While inside the United States the successful development of osteopathic medicine to gain a full medical license has paradoxically lead to its unique identity being blurred and obscured within the medical field, leaving chiropractic, albeit with a more tangential public orthodox status, holding the ground, once the province also of osteopathy. Within the mixed blessings of the embrace of osteopathy by orthodoxy, American osteopaths openness to or interest in Goodheart's new found *Applied Kinesiology*, coming as it did from the rival chiropractic camp, fell largely on stony ground within the American osteopathic profession. In the UK however, the osteopathic Diplomates, who stumbled upon AK at osteopathic post-graduate AK courses in the 1980's, have largely driven the growth of AK. By the 1960's the lure of wealth, status and position ensured all but the boldest US osteopaths turned from their manual medical roots in the face of the powerful mid-century allopathic (drugs and surgery) hegemony.

In the great majority of countries that osteopathy has developed in, beyond its home in the United States most osteopaths like chiropractors, work primarily in the realm of musculoskeletal medicine, focusing most of their skills on non-surgical maladies of the neuromusculoskeletal system and do not usually have a full medical license, even if, as in the United Kingdom, they are like chiropractors, a closed, state registered profession.

Sadly for those who have gained so much clinically from its study, manual therapeutics is still a minority clinical interest within the United States osteopathic profession. Why this might be so, is unclear. However, all clinicians tend towards conservatism, more easily taking and learning from their peers, with more suspicion for systems outside their home domain. The historic distrust that arose between some osteopaths and chiropractors in the United States tended to spill over onto other lands too. The considerable journey of study required to fully master the vast range of Goodheart's scope of exploration, may also be a dissuading factor, along with a blurring of public and professional understanding of Professional *Applied Kinesiology* and other '*Kinesiology*' spin offs.

However, here we will focus on the advantages of integrating such ideas, rather than possible reasons for this still appealing to a minority.

Osteopaths are proud of their hard won palpatory skills. To develop the ability to distinguish between subtle variations of tissue texture and often obscure variations of motility of bony, organ or soft tissue structures is a skill that requires many years of earnest and daily application. This is a hard-won attribute, not easily neglected.

AK Enhances Diagnostic Tools and Scope of Osteopathy

AK offers the osteopath a wide variety of enhancements. First is that it offers an alternative means to evaluate and confirm palpatory diagnostic findings and for measuring the outcomes of therapeutic endeavor.

With the growth of Sutherland's ideas within osteopathy, a mild split grew up between those interested in and prepared to undergo the arduous journey of proficiency in palpating the Involuntary Mechanism of the craniosacral system, as outlined by Sutherland, and further developed by others, since his initial insights versus those who wanted to follow a more musculoskeletal model.

Sutherland's extremely subtle palpation left some wondering whether this was a case of operator's prejudice, and giving up on the whole idea of manipulation with the cranial mechanism

from their frustration in trying to sufficiently master the subtle levels of palpation required to effectively master this approach. (16, 17) This has left a rather barren argument within some quarters of osteopathy as to the validity of two sometimes opposing approaches, leading many osteopaths to see themselves in some way on one of two sides of a false dichotomy between so called 'structural' and 'cranial' approaches to treatment. Still's original insights and approach were themselves subtlety itself, which is why those who came after him had difficulty always conveying what '*The old Master*' had been trying to teach them. (18)

Enter Goodheart - unbeknownst to the great majority caught up in this false dichotomy, and his adaptation of the ideas from Sutherland and others - to the new-found tools of challenge and therapy localization and the functional manual muscle test (fMMT) into diagnosis and treatment of the stomatognathic and craniosacral system.

With Goodheart's insights and techniques comes the refutation that the relationship of structure and function stops at the atlas vertebra. At the same time, while it may seem heretical to the adherents to Sutherland's subtle approach to diagnosis, Goodheart's novel insights open up the whole cranial field to other ways of diagnosis and treatment using his tools of challenge, therapy localization and the fMMT.

It can be readily shown - using the AK approach to cranial osteopathic diagnosis - that muscular dysfunctions as far away from the head as the feet are immediately responsive to cranial treatment. For instance it is frequently demonstrated by AK cranial practice that functional compression of the vagus nerve (at its exit from the skull at the occipito-mastoid suture) will produce a host of vagal symptoms throughout the body. Reproducible patterns of stomach-related muscle inhibition (the pectoralis major- clavicular division) will be found which immediately respond to the proper cranial treatment at the occipito- mastoid suture. AK permits the assessment of the dynamic inter-relationships between a patient's digestive, endocrine, immune, and hepato-biliary systems by isolating and testing their associated external muscle groups that immediately respond to 'cranial challenges' at the foramen of the vagus nerve.

For the clinician struggling with micro-disturbances in the cranio-sacral mechanism, once the methods of AK cranial diagnosis are mastered, the whole field opens up and the division, so vehemently argued about in osteopathic circles, dissolves into irrelevance.

An important example of a world-famous osteopath explicitly influenced by Dr. Goodheart and AK is Dr. Leon Chaitow. Before his recent death, Dr. Chaitow was a practicing osteopath, naturopath and acupuncturist in the United Kingdom with over forty years clinical experience, as well as Editor-in-Chief of the *Journal of Bodywork and Movement Therapies* (The official journal of the *International College of Applied Kinesiology*).

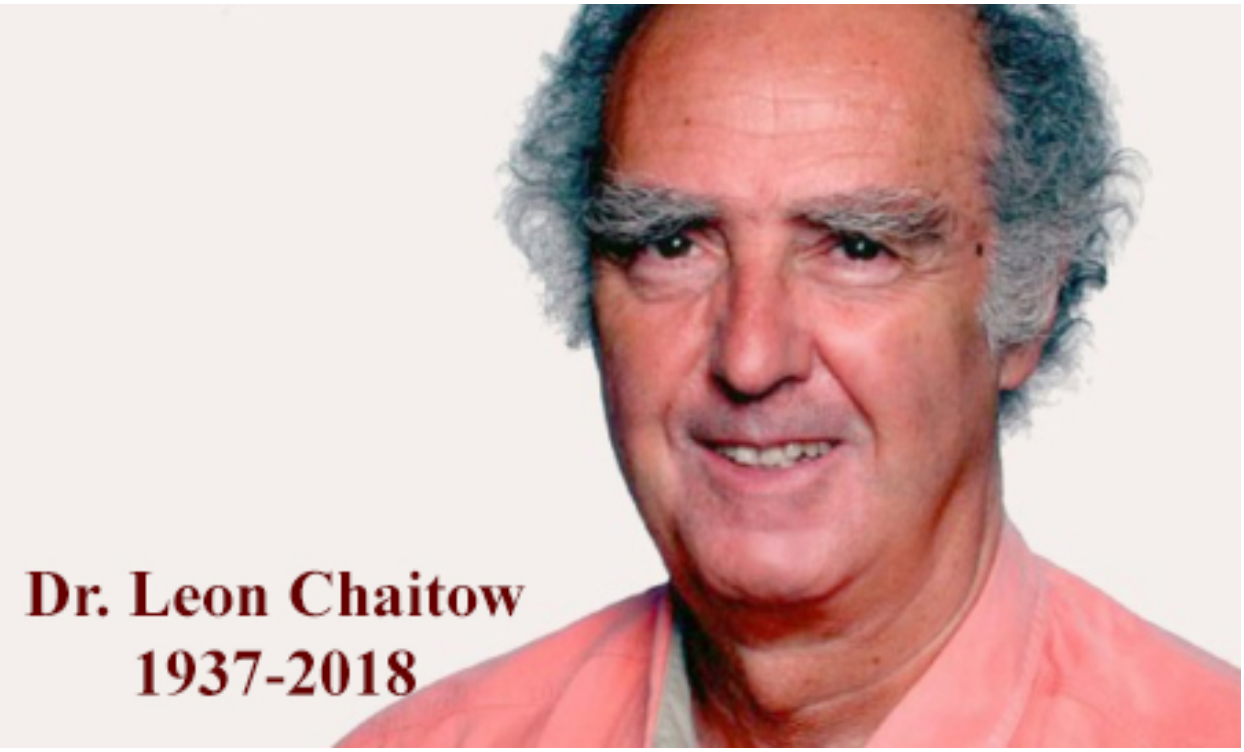
Dr. Leon Chaitow

In Chaitow's books, Goodheart's and *Applied Kinesiology*'s methods are seen as precursors to a '*universal manipulative approach*' that Chaitow suggests will cross professional boundaries and offer the safest and most versatile methodology for the treatment of patients with acute and chronic illness.

In at least 5 of Dr. Chaitow's books the work of Goodheart and *Applied Kinesiology* is presented and praised.

- Clinical Application of Neuromuscular Techniques, Volume 1, 2nd Edition: The Upper Body (2008)
- Naturopathic Physical Medicine (2008)
- Cranial Manipulation: Theory and Practice, 2nd Edition: Osseous and Soft Tissue Approaches (2005)

- Clinical Application of Neuromuscular Techniques, Volume 2:The Lower Body, 2nd Ed. (2002)
- Soft-Tissue Manipulation (1988)



Dr. Chaitow was also invited to lecture to the ICAK USA in Detroit, 8 months before Dr. Goodheart passed in 2008.

Perhaps the greatest usefulness of AK diagnosis is in the area of subtle mechanical disturbance.

With the insight of the '*Body into distortion*' idea, Goodheart opened up the common sense idea that patients do not always display their signs and symptoms conveniently for us, while lying comfortably supine on a treatment table, but rather must sometimes be placed into a more challenging position to reveal their patterns of dysfunction. Nowhere is this more obvious than in the field of hidden nerve entrapment. Hidden in the sense that they are often subtle and inaccessible to instant diagnosis - except with the use of the MMT.

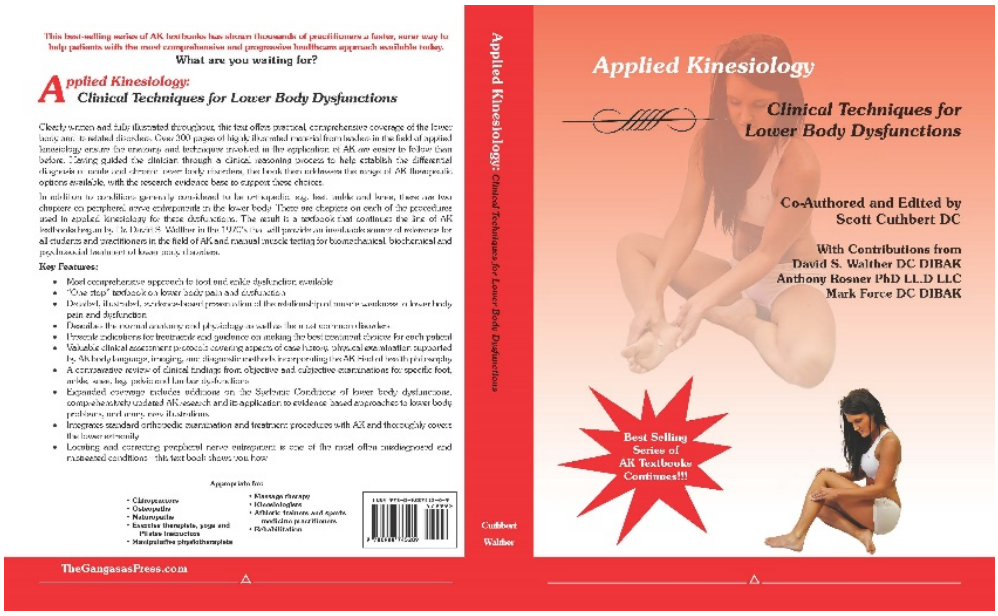
Peripheral nerve entrapment was introduced into *Applied Kinesiology* in Goodheart's discussions of the carpal tunnel (1967) and tarsal tunnel syndromes. 2 (1971) Walther's early review of peripheral nerve entrapment in 1982 broadened the subject in *Applied Kinesiology*, and served as an outline for a comprehensive AK textbook on this subject, with over 200 pages covering peripheral nerve entrapments of the lower body. In this text standard orthopedic examination and treatment procedures are integrated with AK and thoroughly cover the lower extremity. (19, 20)

Cranial nerve entrapment syndromes, treated with *Applied Kinesiology* methods, have also been discussed in the recent peer-reviewed literature. (20) Since muscular weakness found in routine *Applied Kinesiology* examination may be due to peripheral nerve entrapment, it is particularly important that the physician be aware of and able to differentially diagnose different types of the condition. Failure to return muscle weakness to normal function may result from undetected peripheral nerve entrapment. Because applied kinesiologists routinely test muscles to evaluate function, it is not uncommon to come across the more subtle types of peripheral nerve

entrapment. Subtle entrapment may cause major symptoms to the patient that interfere with normal function and create remote problems.

MMT offers newfound precision to clinical examination by uncovering what is often hidden from view if palpation alone is used, and that is the dynamic evaluation of muscle function and its effect on structures that must pass through areas of nerve entrapment or irritations.

Goodheart's insights into the extraordinary potential power of the MMT to uncover hidden dysfunction and link it to a wider vision of the whole, through the potential of AK to see the broader picture, the delicate richness of potential overlap and interpenetration in the triad of health, gives the clinician a new found access to the holism, often aspired to but less often truly accessed without AK.

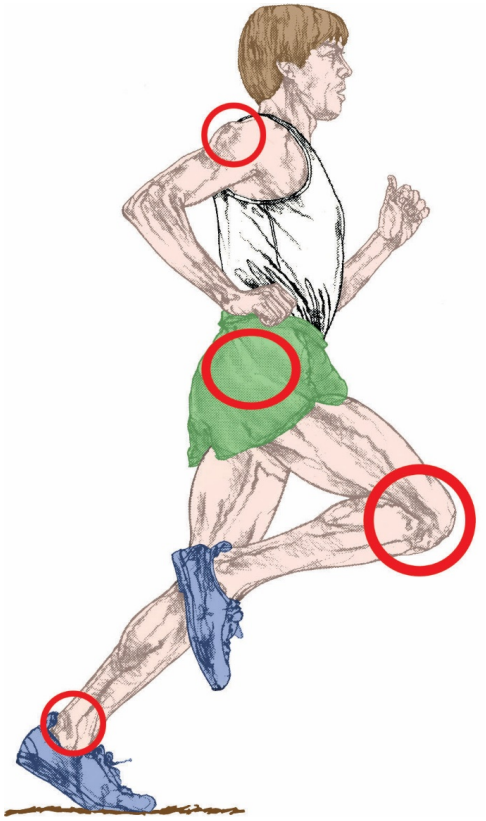


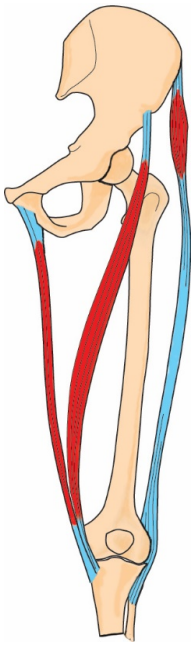
Applied Kinesiology: Clinical Techniques for Lower Body Dysfunctions covers the AK approach to peripheral nerve entrapments like never before

To perceive and then to verify through accurate and objective dynamic assessment the way in which structures such as the knee are highly dependent on full normotonic muscle function, leads to uncovering a treasure trove of discrete malfunction that, if left unresolved, may set up the body for later breakdown. Many knee problems are the direct result of improper support to the knee from the muscles that attach above and below it. Without the level of sophistication in application of MMT that Goodheart introduced, a myriad of hidden factors are going to be missed. AK attempts to identify these altered states of integrative function insofar as they impact on the person's condition.

Applied Kinesiology in Functional Medicine

The majority of doctors in the healing arts have directed their attention toward pathology and trauma which are demonstrated by significant abnormalities observed in the laboratory, on X-ray, and by standard physical diagnosis. The great strides that have been made in these fields are commendable, yet there remains the patient who complains of headaches, chest pain, or joint disturbance – among numerous other "lifestyle" or "stress- related" symptoms – but who is pronounced "healthy" after a thorough diagnostic workup. These subjective symptoms are often diagnosed as psychosomatic or frankly ignored because no objective findings are present. Limited diagnostic procedures in modern general medicine cause the physician to only occasionally be able to evaluate the cause of these symptoms.





There is frequently an absence of laboratory findings because these conditions are usually functional rather than pathological. Although it has been difficult to evaluate this type of condition in the past, systems of diagnosis for these functional patterns of body malfunction have arisen. *Applied Kinesiology* has been picked up and used by more and more medical doctors around the world because it enables physicians to find the basic underlying cause of these previously enigmatic symptom complexes about which a large percentage of the population complains.

Most illnesses in industrialized societies are due to functional rather than pathological processes; most pathological illnesses are preceded by a chronic period of functional illness. Health is not an accident; it is the outcome of the interaction of an individual's genetic constitution and environment. Many people 'get by' throughout their lives without optimal organic or biomechanical function and yet remain asymptomatic. This may depend on the goddess Fortune as well as the world-view and impulses of the person in addition to their inherited characteristics, nutritional status, psychosocial factors, life history and more – in other words, the entire context within which the *Applied Kinesiology* triad of health is experienced and embraced. If one of the objectives of work in this field is to prevent illness and ameliorate the burdens of the living patient and to help them realize their full potential, then what has been discussed in this chapter will become a part of the health care approach physicians and knowledgeable patients around the world embrace.

From the beginnings of *Applied Kinesiology*, practitioners have observed an association between muscle- joint function and visceral-autonomic dysfunction. It is exciting to see accumulating research and developing models from a wide range of academicians and clinicians converging toward concurrence with the field of *Applied Kinesiology*. This development will, ideally, lead to more coordination with physicians from other fields and backgrounds to work synergistically with clinicians utilizing *Applied Kinesiology* methods in the treatment of patients with functional illnesses. In fact, it was Dr. Astill-Smith who invited Dr. Jeffrey Bland, the father of

Functional Medicine, to an early AK/Functional medicine seminar in Bath, UK in the early '90's after which Astill-Smith was invited to present AK to the first *International Conference of the Institute of Functional Medicine in America*.

Evidence-based medicine, basic science and clinical outcomes data now exists to support the assessment and treatment (frequently co- treatment with other specialist physicians) for patients with disorders of the nervous, autonomic, neurohormonal, immune, respiratory, circulatory, and lymphatic systems using *Applied Kinesiology* methods. The objective of this work is to prevent illness, ameliorate suffering, and to help patients reach their full potential.

Janet Travell, MD

Myofascial trigger point (MTrP) weakness occurs when a muscle cannot fully activate all of its contractile fibers because of the presence of a trigger point. The importance of this observation, that motor dysfunction and particularly muscle inhibition are present in muscles housing MTrPs cannot be over-estimated. The weakness results from reflex motor inhibition and may occur without atrophy of the affected muscle, emphasizing Travell's insight that the MTrP is directly influenced by the CNS and vice versa. A few investigators have reported on the effects of MTrPs on muscle activity using newer online computer analysis of EMG amplitudes. These reports indicate that MTrPs not only influence the muscle in which they reside, but that their influence can be transmitted through the CNS to other muscles. (22) According to Simons and Travell '*the motor effects of MTrPs may be the most important influence they exert, because the motor dysfunction they produce may result in overload of other muscles and spread the MTrP problem from muscle to muscle.*'

Critically important is that according to Travell and Simons, an active trigger point will inhibit the function of the muscle in which it is housed as well as those which lie in its target zone of referral. (21) Therefore the weak muscle may be where the MTrP resides or in a muscle which experiences referred pain from the MTrP, or both. '*Although weakness is generally characteristic of a muscle with active myofascial trigger points, the magnitude is variable from muscle to muscle, and from subject to subject. EMG studies indicate that, in muscles with active myofascial trigger points, the muscle starts out fatigued, then fatigues more rapidly, and finally becomes exhausted sooner than normal muscles.*' (22)

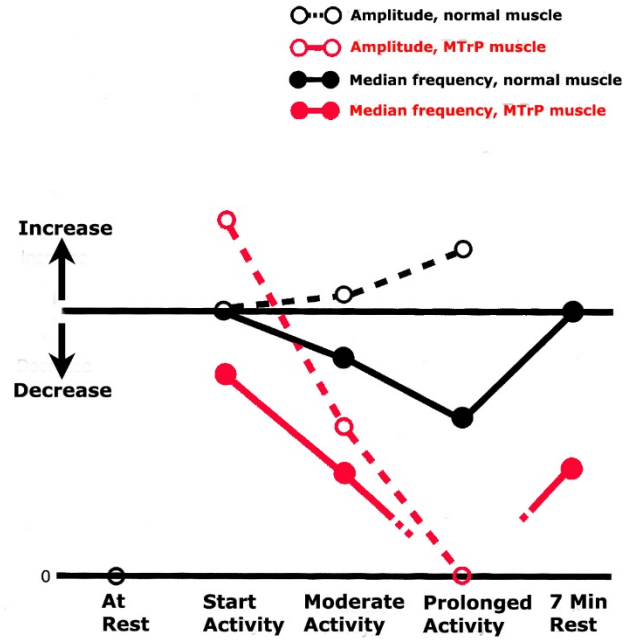
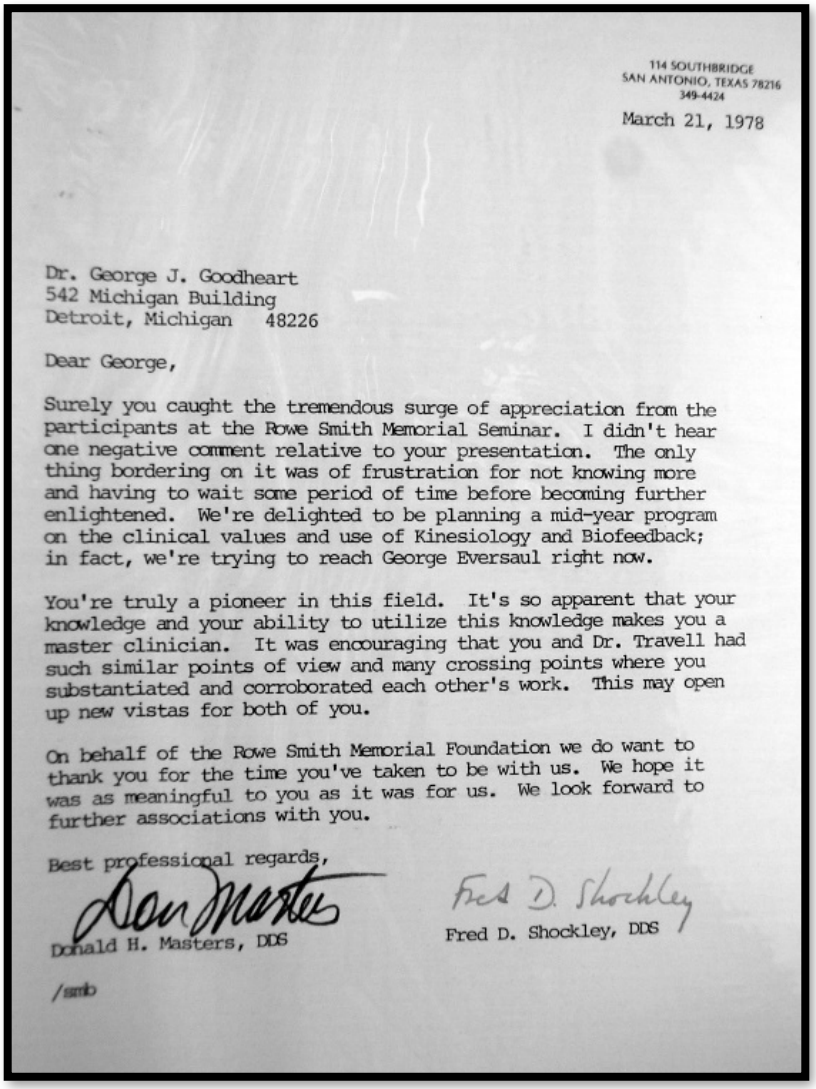


Figure 2.3. Comparison of surface electromyographic response to fatiguing exercise of normal muscle (*black lines*) and muscle with active myofascial trigger points (*red lines*). The averaged amplitude (*open circles*) and mean power frequency (*solid circles*) of the electromyographic record from the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

Figure illustrates schematically the EMG changes observed in exercised muscles with TrPs. The involved muscle shows a degree of fatigue at the beginning of a repetitive task, with accelerated fatigability and delayed recovery. These features are hallmarks of the motor dysfunction of muscles containing MTrPs. Using electromyographic evidence 21 has shown that myofascial trigger points '*cause reflex spasm and reflex inhibition in other muscles, and can cause motor incoordination in the muscles with the trigger point.*'

Simons et al (21) also suggest that the weakness resulting from MTrPs must be evaluated both statically and dynamically, confirming the suggestion of Goodheart for the diagnosis of MTrPs in AK, the '*muscle stretch reaction*'.

Dr. Goodheart was a speaker with Dr. Travell at the Smith-Rowe Memorial Seminar in San Antonio Texas in March 1978.



114 SOUTHBRIDGE
SAN ANTONIO, TEXAS 78216
349-4424

March 21, 1978

Dr. George J. Goodheart
542 Michigan Building
Detroit, Michigan 48226

Dear George,

Surely you caught the tremendous surge of appreciation from the participants at the Rowe Smith Memorial Seminar. I didn't hear one negative comment relative to your presentation. The only thing bordering on it was of frustration for not knowing more and having to wait some period of time before becoming further enlightened. We're delighted to be planning a mid-year program on the clinical values and use of Kinesiology and Biofeedback; in fact, we're trying to reach George Eversaul right now.

You're truly a pioneer in this field. It's so apparent that your knowledge and your ability to utilize this knowledge makes you a master clinician. It was encouraging that you and Dr. Travell had such similar points of view and many crossing points where you substantiated and corroborated each other's work. This may open up new vistas for both of you.

On behalf of the Rowe Smith Memorial Foundation we do want to thank you for the time you've taken to be with us. We hope it was as meaningful to you as it was for us. We look forward to further associations with you.

Best professional regards,

Donald H. Masters, DDS

Fred D. Shockley, DDS

/smb

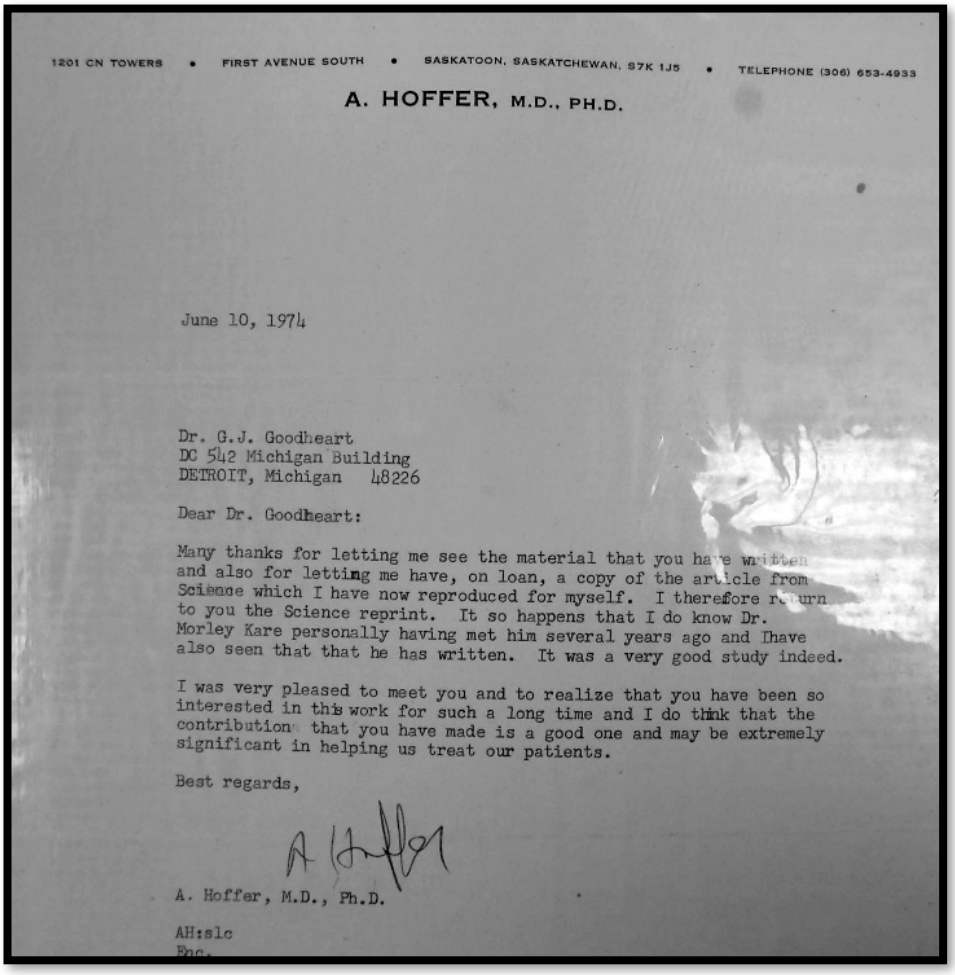
In the Rowe Smith seminar both Drs. Travell and Goodheart faced a patient with temporomandibular disorder. The patient could open their mouth on a very limited basis. Dr. Travell treated the patient and helped him with pain reduction and mouth-opening, but the patient's mouth was still somewhat painful on opening and limited in ROM. Dr. Goodheart then treated the patient; after his assessment and treatment, the patient could open their mouth fully and without pain.

Dr. Travell and Goodheart were then given enthusiastic applause from the crowd, with Dr. Travell offering a curtsy to Dr. Goodheart and Goodheart returning a curtsy to Dr. Travell.

Dr. Travell told the audience (mostly dentists) that Dr. Goodheart had found another method for the diagnosis of myofascial trigger points in muscles using the *Applied Kinesiology* manual muscle test method.

Abram Hoffer, MD, PhD

Father of Orthomolecular Medicine



1201 CN TOWERS • FIRST AVENUE SOUTH • SASKATOON, SASKATCHEWAN, S7K 1J5 • TELEPHONE (306) 653-4933

A. HOFFER, M.D., PH.D.

June 10, 1974

Dr. G.J. Goodheart
DC 542 Michigan Building
DETROIT, Michigan 48226

Dear Dr. Goodheart:

Many thanks for letting me see the material that you have written and also for letting me have, on loan, a copy of the article from Science which I have now reproduced for myself. I therefore return to you the Science reprint. It so happens that I do know Dr. Morley Kare personally having met him several years ago and I have also seen that that he has written. It was a very good study indeed.

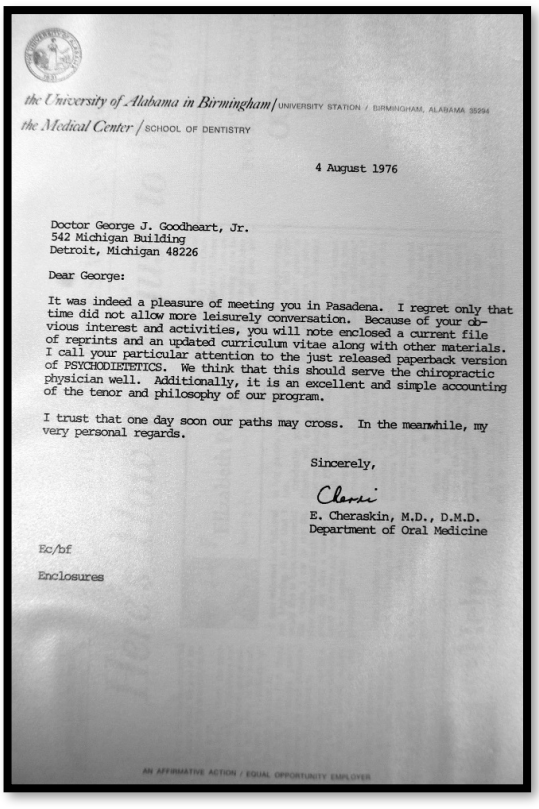
I was very pleased to meet you and to realize that you have been so interested in this work for such a long time and I do think that the contributions that you have made is a good one and may be extremely significant in helping us treat our patients.

Best regards,

A. Hoffer, M.D., Ph.D.

AH:slc
Enc.

Emanuel Cheraskin, MD, DMD



the University of Alabama in Birmingham / UNIVERSITY STATION / BIRMINGHAM, ALABAMA 35294
the Medical Center / SCHOOL OF DENTISTRY

4 August 1976

Doctor George J. Goodheart, Jr.
542 Michigan Building
Detroit, Michigan 48226

Dear George:

It was indeed a pleasure of meeting you in Pasadena. I regret only that time did not allow more leisurely conversation. Because of your obvious interest and activities, you will note enclosed a current file of reprints and an updated curriculum vitae along with other materials. I call your particular attention to the just released paperback version of PSYCHODIETETICS. We think that this should serve the chiropractic physician well. Additionally, it is an excellent and simple accounting of the tenor and philosophy of our program.

I trust that one day soon our paths may cross. In the meanwhile, my very personal regards.

Sincerely,

Cheraskin

E. Cheraskin, M.D., D.M.D.
Department of Oral Medicine

Ec/bf

Enclosures

AN AFFIRMATIVE ACTION / EQUAL OPPORTUNITY EMPLOYER

Hans Garten MD & Wolfgang Gerz MD

Hans Garten, MD and Wolfgang Gerz, MD have both written textbooks on *Applied Kinesiology* (in German) for manual medicine students in Europe.23-29

Jose Palomar, MD

Another manual method derived from PAK and growing in popularity is *Proprioceptive-Deep Tendon Reflex* (P-DTR). Developed by a student of Goodheart's, Dr. Jose Palomar is an orthopedic surgeon from Mexico and his system has been successfully used in clinical practice for several years. Its evidence-base is growing as are its published outcome studies. (30) Dr. Palomar created a unique system of neurological provocations and discovered rules about how the CNS reacts to particular stimuli – both functionally and dysfunctionally. Those types of manual effects (stimulus) can be produced in a form of light swiping (to stimulate the receptors of touch), stretching (to stimulate Golgi receptors), deep pressure (Paccini) and many more. Today PDTR works with most of the exteroceptors, interoceptors and proprioceptors.

Drs. Palomar and Goodheart

Applied Kinesiology in Olympic and Professional Sports

Dr. Goodheart was invited as the first chiropractor to be part of the U.S. Olympic Sports Medicine Committee. The first official appointment of a chiropractor to the US team began with the 1980 Winter Olympic Games in Lake Placid, when Dr. George J. Goodheart, Jr's name was given to Irving Dardik, MD (then chairman of the United States Olympic Committee (USOC) Sports Medicine Committee, and a vascular surgeon) by Dr. Stephen J. Press. (31) Dr. Goodheart treated some 15 athletes and '*their response to treatment was great. Some of the ski-jumpers moved up four places after treatment, although I grant that might have happened regardless,*' as Goodheart modestly pointed out.

Interestingly, Dr. Dardik was a world-class runner himself and developed a problem with his leg in 1978. After a few miles of running, his hamstring would cramp whenever he tried to pick up the pace and sprint. One of his colleagues suggested he contact Dr. Goodheart. Dr. and Mrs. Goodheart flew to New Jersey and met Dr. Dardik at his office. After a preliminary discussion, Dr. Dardik was impressed with Goodheart's MMT examination of his problem and his leg. Goodheart diagnosed the symptoms as caused by a gait-mediated reactive muscle condition. After

manipulation of the mechanoreceptors located on the foot and correction of foot subluxations, Dr. Dardik was able to run faster than he had in some time with no pain or cramping.

Dr. Goodheart, back home

DC RECEIVES OLYMPIC APPOINTMENT

Dr Goodheart

Dr George Goodheart, Detroit chiropractic educator, has been appointed to the Commission on Sports Medicine Modalities of the US Olympic Council on Sports Medicine.

The announcement, following Dr Goodheart's attendance at a commission meeting, January 4, was made by Dr Irving I. Dardik, chairman of the sports medicine council. Other members of the commission, in addition to Dardik as chairman, are Drs Murray Goldstein, Peter Jokl, Ronald Lawrence and Bertram Zarins, all MDs.

Dr Goodheart is the **first** DC to hold a position on the policy-making bodies of the Olympic Committee. Dr Dardik announced that the commission will seek two additional DCs through interviews.

Dr Goodheart, an ACA member, is presently a director of the National Chiropractic Mutual Insurance Company *(NCMIC)*.

Speaking of his appointment, Dr Goodheart said: "I welcome the opportunity to provide chiropractic services to our Olympic athletes. The addition of chiropractic services by the Olympic sports medicine council will doubly serve our national athletes. Many people have contributed to this healthy situation and, since the athletes deserve the best of all types of health care, all the health professions can contribute to their well being and maximum performance. Chiropractic is uniquely related to the nervous system and the musculoskeletal system and can provide therapeutic and preventative support as well as improved performance potentials."

Dr Goodheart's appointment is the end result of negotiations with the Olympic sports council to include chiropractic care in treatment of US Olympic athletes.

The second meeting of the commission was held in Boston on February 29, and the third will be in Colorado Springs, April 6. □

The ACA Journal of Chiropractic/March 1980

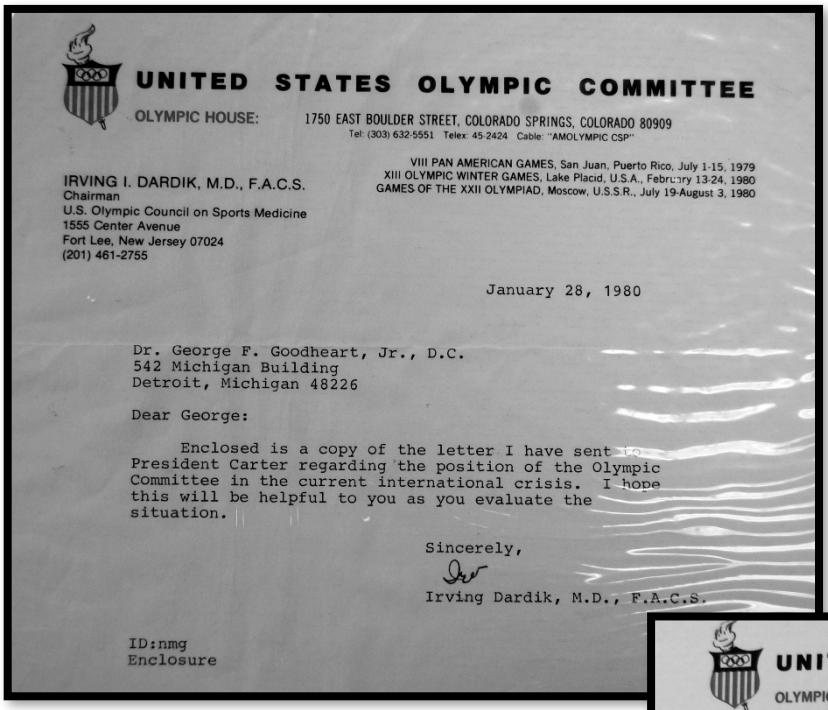
Goodheart felt the inclusion of a chiropractor on the Olympic Medical Staff was a must. '*I think it's an important thing. Chiropractic is uniquely related to the nervous system and the musculoskeletal system and can provide therapeutic and preventative support, as well as improved performance potentials.*' The efforts of Dr. Goodheart and the chiropractors who followed after him have played an essential part in the success of the United States' Olympic athletes, helping the US win more than 1,000 medals since 1980, including 467 gold medals.

Dr. Goodheart was an invited speaker at the USOC's '*Conference on Biomechanics and Kinesiology in Sports*' four years later (1984), and was elected a member of the *American College of Sports Medicine* the same year.

The historic importance of the appointment of Dr. Goodheart to the Olympic Team in Lake Placid in 1980 was emphasized in the journal *Chiropractic History*:

> '*Since the days when Dr. Goodheart established good relationships with the medical staff during the 1980 Winter Olympics and the creation of the chiropractor intern selection program in 1984, few problems have arisen between the chiropractors and orthodox physicians.*' (31)

The letters below are from Dr. Irving Dardik, Chairman of the U.S. Olympic Council on Sports Medicine.



UNITED STATES OLYMPIC COMMITTEE

OLYMPIC HOUSE: 1750 EAST BOULDER STREET, COLORADO SPRINGS, COLORADO 80909
Tel: (303) 632-5551 Telex: 45-2424 Cable: "AMOLYMPIC CSP"

VIII PAN AMERICAN GAMES, San Juan, Puerto Rico, July 1-15, 1979
XIII OLYMPIC WINTER GAMES, Lake Placid, U.S.A., February 13-24, 1980
GAMES OF THE XXII OLYMPIAD, Moscow, U.S.S.R., July 19-August 3, 1980

IRVING I. DARDIK, M.D., F.A.C.S.
Chairman
U.S. Olympic Council on Sports Medicine
1555 Center Avenue
Fort Lee, New Jersey 07024
(201) 461-2755

January 28, 1980

Dr. George F. Goodheart, Jr., D.C.
542 Michigan Building
Detroit, Michigan 48226

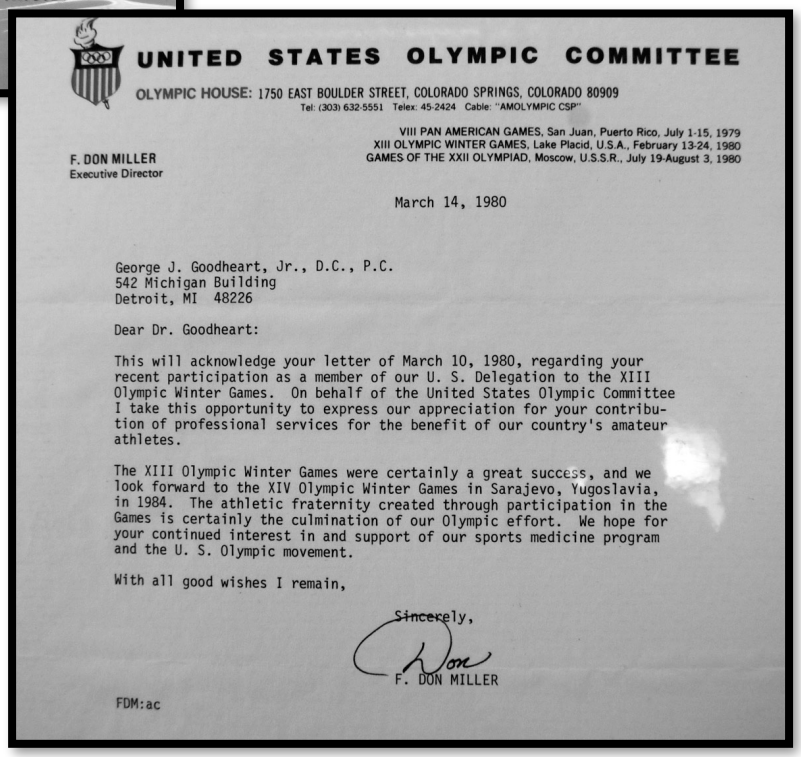
Dear George:

Enclosed is a copy of the letter I have sent to President Carter regarding the position of the Olympic Committee in the current international crisis. I hope this will be helpful to you as you evaluate the situation.

Sincerely,

Irving Dardik, M.D., F.A.C.S.

ID:nmg
Enclosure



UNITED STATES OLYMPIC COMMITTEE

OLYMPIC HOUSE: 1750 EAST BOULDER STREET, COLORADO SPRINGS, COLORADO 80909
Tel: (303) 632-5551 Telex: 45-2424 Cable: "AMOLYMPIC CSP"

VIII PAN AMERICAN GAMES, San Juan, Puerto Rico, July 1-15, 1979
XIII OLYMPIC WINTER GAMES, Lake Placid, U.S.A., February 13-24, 1980
GAMES OF THE XXII OLYMPIAD, Moscow, U.S.S.R., July 19-August 3, 1980

F. DON MILLER
Executive Director

March 14, 1980

George J. Goodheart, Jr., D.C., P.C.
542 Michigan Building
Detroit, MI 48226

Dear Dr. Goodheart:

This will acknowledge your letter of March 10, 1980, regarding your recent participation as a member of our U. S. Delegation to the XIII Olympic Winter Games. On behalf of the United States Olympic Committee I take this opportunity to express our appreciation for your contribution of professional services for the benefit of our country's amateur athletes.

The XIII Olympic Winter Games were certainly a great success, and we look forward to the XIV Olympic Winter Games in Sarajevo, Yugoslavia, in 1984. The athletic fraternity created through participation in the Games is certainly the culmination of our Olympic effort. We hope for your continued interest in and support of our sports medicine program and the U. S. Olympic movement.

With all good wishes I remain,

Sincerely,

F. DON MILLER

FDM:ac

Goodheart's Report About the Olympic Games

After the Olympic Games, Dr. Goodheart gave a review of his Olympic experiences for *Chiropractic Economics*.

> *'I got to Lake Placid Sunday Night and the US Olympic Committee had a station wagon pick me up. We were lodged at the Whiteface Inn, a very fine resort in the very famous Adirondacks. I reported for processing as per Colonel Miller's orders on February 11th. The processing basically consisted of going through a series of stations. We were fitted with Olympic and athlete delegate clothing, estimated to be worth $1,500.00 and $2,000.00. The winter gear consisted of boots, several types of pants and ski pants, a shearling sheep jacket, a ten-gallon hat, sweaters, T-shirts, turtlenecks, underwear, a camera, and even a hair dryer. The gear received was of the top quality and it was a pleasure to receive and use them. The Levi Strauss Company was on hand to fit and make any alterations necessary-these accomplished in record time. I received my clothing allotment and the processing circuit at around 10:00 and by 4:00 o'clock the alternations have been accomplished. The Levi Strauss Company was very efficient.*
>
> *'Credentials were obtained at the Olympic Village and the credential committee surveyed your relationship to the US Olympic delegation. You were given glorified dog tags encased in plastic with your picture and description of your activity and also a certain code number. In the event you did not live in the Olympic Village, these were exchanged at the reception area by the New York State police for a visitor's pass which you had to wear around your neck at all times. The security maintained by the New York State police included checkpoints at the initial penetration into the Olympic Village area and also the actual input to the Olympic Village. The security was very high.*
>
> *'The area for the US Olympic Committee was at the periphery of the Olympic Village and consisted of a number of trailers that had been erected by a Canadian concern who low bid the project. The Olympic medical and medical therapy trailer was housed in half with the press section and there was no way for a chiropractic treatment table to be placed in the section. Dr. Dardik was kind enough to find another trailer which had been used for TV viewing for the Olympic athletes and had been divided into two sections. I was given the use of half a section of the trailer and through the good graces of Skip Goggin, President of Williams Manufacturing Company, Elgin, IL, where they manufacture the Zenith table and Mark Feld, distributor of Zenith and other chiropractic products in New York, we got the table installed. They made the long trip to New York to the Olympic Village with many difficulties trying to get the table past the security. The contents of the vehicle were "sanitized" which meant sniffed by dogs who were trained to seek out high explosives but finally installed in the trailer adjacent to the sports medicine trailer. This was accomplished on Thursday of the first week and we began seeing patients on Friday.*
>
> *'Interestingly enough the first patient I saw was a world cupper on the Canadian ski team, Dave Irwin, who was a patient of a good friend, Dr. Dan Gleason in Thunder Bay, Ontario. Soon after, I saw Dave Murray, another Canadian skier with a very high performance level. He was followed by the manager of the Canadian ski team who himself had been an Olympic skier in Poland; he is now a Canadian citizen. We also saw the physician for the Canadian ski team, Dr. Bernie La Long, who was very interested in the chiropractic care of the athletes under his supervision. We saw a number of US athletes and took pictures during treatment. We saw Gary Crawford and Kerry Lynch, both who are ski jumpers in the combined Alpine events and did very well; and we saw briefly Lisa Marie Allen, a very fine figure skater from California who had some difficulty*

with an anterior thoracic on her very first days. The manager of the Canadian ski team was a former Polish Olympic skier, Andrzej Kozbial. Most of these patients had structural faults as well as muscle imbalances and they were very interesting to treat, I also treated John B. Kelly, vice chairman of the US Olympic Committee, who was extremely interested in chiropractic care for our 'United States athletes and who may very well be the next president of our US Olympic delegation. (Editor: He was!) I saw a member of the United States luge team, John Fea. These patients responded very well.

I was present at the time Randy Gardner (partner to Tai Babilonia) was examined and treated and my opinion was requested (Editor's note: after the fact) as to how I would have treated him but the initial agreement that was made by Dr. Dardik, Dr. Dailey and myself was a fair one I feel; if the Olympic athletes requested chiropractic care it would be given to them and there would be a fine level of cooperation between the Olympic medical staff and my own section. This I think should change in the future so that the athletes are given the opportunity for a good diagnostic examination and treatment, by all physicians on staff, that this initial beginning required at least this type of activity. The facilities and services afforded by the Williams Manufacturing Company, manufacturer of the Zenith table which was the electric model with the drop pelvic section, was invaluable and their assistance in securing transportation was also extremely valuable in a time when transportation was difficult in the first 3 or 4 days.

'I established good relationships with Dr. Tom Daley a superb physician, Dr. Cal Abley, a very fine physician from Alabama, and Dr. George Stedman who I think should have received a silver medal for his orthopedic activities in helping Phil Mare, the silver medal skier of the United States. I also established a good relationship with the trainers and at an upcoming meeting in Boston and in Colorado Springs in the future as a post- Olympic wrap- up, I am making some suggestions as to procedural patterns that may be followed to insure better care for the athletes in future US Olympics.

'I welcomed the opportunity to provide chiropractic services to our Olympic athletes. The addition of chiropractic services by the Olympic sports medicine committee will doubly serve our national athletes. Many people have contributed to this healthy situation and since the athletes deserve the best of all types of heath care, all the health professions can contribute to their well- being and maximum performance. Chiropractic is uniquely related to the nervous system and the musculoskeletal system and can provide therapeutic and preventative support, as well as improved performance potentials by some of its more recent developments in Applied Kinesiology.

'Chiropractic on the sports medicine council has been a tremendous breakthrough. We were asked to visit the laboratory training center for the American athletes preparing to compete in the 13th Olympic Winter games at the Lake Placid sports medicine center by Dr. Robert Burns Arno, M.D. who is the director. Many doors have opened and are opening and it's a matter of building personal relationships on mutual trust and confidence and as time goes on I am sure that the inclusion of chiropractic at this level will precede the inclusion of chiropractic in many other levels of our daily activity. I received a call while on duty at the chiropractic center from Dave Diles of ABC to do a TV film spot on chiropractic and treatment but it was the opinion of Dr. Dardik and also Dr. Daley that this would re-kindle animosities that were being put to rest and despite the effort on the part of Dave Diles, I did not attempt to effect that type of liaison; and as I said to Dr. Daley when I left and we spent many an hour talking waiting for athletes not to hurt themselves, I felt this was a very strong beginning and although the publishing would have been favorable it would have come at the wrong time and in the future. I'm sure we will get the proper public recognition we need.

'The care of Olympic athletes is unusual in that you have to check athletes during active motion. Many of them have reactive problems unique to applied kinesiological techniques and many of them require very subtle investigation of the relationship of muscles, one to another, as well as the more straightforward techniques. In kinesiology we are developing these techniques and with the aid of many of the men and Applied Kinesiology at different levels, we will be able to provide chiropractic care at the training center level for the Olympics.

'The transportation problems as you read were enormous for the first 4 or 5 days. The food at the Olympic Village was fantastic. The overall activity of the New York State police was the most efficient I've ever seen. The hospitality and good will that was evidenced by all members of the staff toward me is very much appreciated and I welcome this opportunity to give the readers of Chiropractic Economics a little bird's eye view on a very interesting 2 weeks in my life and a very strong event in the history of chiropractic services for our nation.

'Treating Olympic athletes who are in superb condition and superbly trained is a little different than having a regular practice and a great deal of time is spent in waiting in a paradoxical situation in which you hope the athlete does not hurt himself but if he does you hope you can be of service and the Olympic medical staff which is obviously far more enormous than the single chiropractic member was busy, but when compared numbers we had about the same number of active patients. The athletes need reassurance and repeated treatment, something a little different than one would practice in ordinary general practice; but I was very pleased with the response, as was Dr. Dardik, and certainly the ability to provide a good chiropractic and future potential.'

Dr. George J. Goodheart, Jr. 1980

Dr. Leroy Perry was an essential early figure in the AK and Sports Chiropractic movements, and he worked with numerous Olympic and professional athletes and teams. (32) He treated such world famous athletes as Dwight Stones, Bruce Jenner, Tracy Austin and Stan Smith. Many other AK physicians have worked with professional athletes and sports teams as well. Dr. Evan Maldenoff for example was with the Kansas City Chiefs for 13 years.

Dr. Jean-Pierre Meersseman was the leader of the sports physicians taking care of the professional football (soccer) team AC Milan. Dr. Meersseman created the MilanLab that served AC Milan and dozens of very high profile professional football players. At AC Milan there was a 43% reduction in days off from injuries; a 70% reduction in drugs and an overall reduction of injuries by 80%. In the long term (three years), the physical performance average of the AC Milan players had increased by 50%. Meersse- man and Milan Lab also enabled Paolo Maldini and Alessandro Costacurta to play into their 40s, with Serginho and Cafu not far behind. David Beckham was also served by Dr. Meersseman at Milan Lab, and '*responded exceptionally well to what we did.*' After AC Milan Dr. Meersseman then began working with Premier League footballers in London. (33)

Tens of thousands of world-class athletes around the world have optimized functional performance using AK methods to maximize their performance.

Dr. Wayne Steiner helped Michael Johnson, track-and-field star.

Thanks to chiropractic and AK, Johnson won the European Grand Prix by a margin of 4 meters.

Above: Dr. Jean-Pierre Meersseman, Founder of MilanLab.
Right: Michael Johnson, European Grand Prix winner

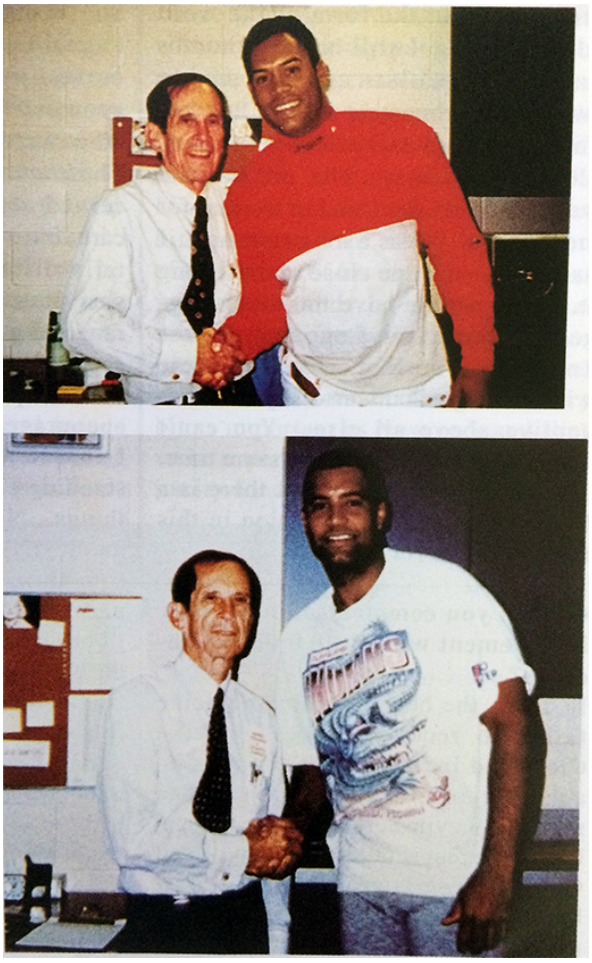
Dr. Don McDowall and Ivan Lendl

Dr. David Leaf was also with AC Milan and served individual New England Patriot players. Dr. Tom Roselle was with the Washington Mystics for 3 years and treated individual Washington Redskin players and Olympians. Dr. Tom Palic is a former U.S. Ski Team chiropractor and a medical provider for Red Bull Athletics. Dr. Kirk Johnson was the personal chiropractor for professional tennis star Jack Sock, and traveled the world with him. Sock was a member of the 2016 USA Olympic Team and won a gold medal in mixed doubles and a bronze medal in men's doubles. (34) Dr. Don McDowall was Ivan Lendl's chiropractor.

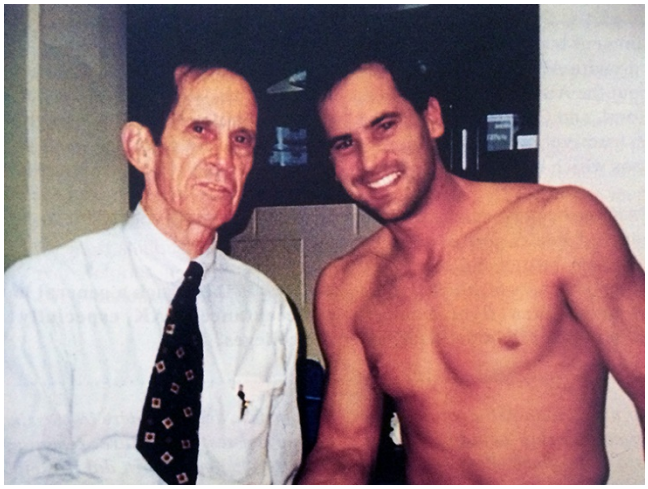
Dr. Craig Buhler was the AK chiropractic physician for the professional basketball team Utah Jazz for 26 years. 'As a result of his techniques, '*the team had the lowest player missed games due to injury (PMGI) rate in the NBA*' - 61 player-missed games due to injury within a 20-year long span, compared to the league average of 171 in the same timeframe.

'*Then, between 2001 and 2006 when I stopped having access to the players, we had the most rapid increase in player missed games due to injury rates in the league in the 25-year period,*' he says. '*It validates what happens when you use the technique and integrate it with good quality medical and training care.*' (35)

Dr. Dan Duffy worked with the *Cleveland Indians Professional Baseball Team* and recounts, '*In 1997, the best of sports medicine failed to recover Albee Lopez, a Cleveland Indians pitcher on the disabled list for 15 days. Since I had relieved Kevin Seitzer of his career long knee and shoulder pain and fixed Orel Hershiser's (LA Dodger Pitcher) groin problem, they both advised Mike Hargrove to call me in to see if I could turn the trick. So I drove 50 miles to Jacob's Field to treat Lopez there. I explained every move I made to the orthopedic surgeon and the two physical therapists, who were worriedly watching me. These are good people, genuinely concerned about the players under their care, but viewing the world from a totally different perspective. When I was done, Lopez demonstrated full range of motion with no pain, and subsequently went back to work. This created quite a stir in the clubhouse, encouraged by Seitzer and Hershiser, I also relieved Chad Ogea of along-standing elbow problem, among other things.*'



Dr. Dan Duffy and Robby Alomar



Dr. Dan Duffy and Omar Visquel, shortstop

Kevin Seitzer's (former 3rd baseman in Major League Baseball, Cleveland Indians) open letter (1999).

'*To whom it may concern:*

'I am writing this testimony on behalf of all applied kinesiologists in the world who are experts in this field.

'I am a retired major league baseball player of eleven years. I played from 1986 to 1997 with the Kansas City Royals, Milwaukee Brewers, Oakland Athletics, and Cleveland Indians. Over the course of my career, I endured many injuries, some of which knocked me from the lineup, but most of them I played through. As my career went on and my years in age go "up there", it became increasingly more difficult to stay on the field because of nagging injuries. One part of my body would flare up, which would cause something else to break down because I would start favoring something, and it seemed as though I could not stay injury (pain) free. Rarely did I come off the field because of these; only broken bones and surgery limited my action at times throughout my career.

'I had five knee operations over the course of my career and also was born with a disc problem in my back, which caused me to see chiropractors on a regular basis since high school. All this brings me to my point – my first introduction to Applied Kinesiology (AK). It was in spring training of 1996 (I think…it may have been '95; baseball does that to the memory) that I first experienced someone in the field of AK. Dave Nilsson, who is from Australia, brought his own personal AK guy over for part of the season. I had a terrible ankle sprain that happened just before spring training (about three days before I left… stupid me, playing basketball), and Nilsson suggested that this guy take a look at me. His name was Eril and his last name I should not even attempt to pronounce or spell. It was something like Americazerra (Eril, if you read this article. I apologize for butchering your name). He was a real nice guy, too. Anyway, he got me back on the field in a matter of days. I should have missed about two weeks with this sprain. Needless to say, from that point on, I was a believer in AK. He went to Milwaukee with us that season and worked on several of the players. I never felt so good during a baseball season. The only problem was that when I couldn't get an adjustment for a long time, I blew out pretty easily. So, we took him on the road with us a few times. He was great!

'From that point on, I was no longer looking for chiropractic help. I was looking for someone in AK. This is not to "bag" on chiropractors because they really helped me a lot throughout my career. Life was not always easy in baseball, from a physical standpoint. Also, just to make a point, I took very good care of myself from about 1989 on. I was on a very structured lifting program and biked almost every day or did some sort of running. I tried to eat right (as much as a guy who lives in restaurants on a daily basis can) and in 1988 turned my life over to Christ and received Him as Lord and Savior. Because of this, I was able to completely stop drinking. I used to pull and strain muscles and just be tight all the time. I had a terrible drinking problem dating back to college. Thankfully, I have been "dry" since that point in my life. This really has nothing to do with AK, but I thought I would share this because it is really important to me. Thanks!

'In 1996, in September, I was traded to the Cleveland Indians. It was here that I met Drs. Dan Duffy, Sr. and Jr. These guys are the best! Doc Sr. has got to be a legend in the AK field. If there is anyone better at this stuff than this guy, I want to meet him. I never knew I could feel so good. I saw these guys all through 1997 and felt great all year. Doc Duffy challenged me to start eating "properly" (this word means something totally different in the field of AK). It has to do with combining your foods properly. Ask the pros for the manual; that's what I had to do. I dropped about 3-4 pounds and about 5% body fat

during the course of the season. I never felt so good and had so much energy (I just wish I could have stayed with that program. I like candy too much. Sorry, Doc!).

'I just want to say that I am a HUGE believer in Applied Kinesiology and would recommend to everyone to find a good AK guy near you and give them a try. You won't regret it. Even if you think you feel pretty good, you have no idea how good you can really feel. I have never written anything 'this long since college, which was many moons ago, and really had a hard time with writing then, but this was kind of fun.

Well, congratulations if you made it to this point. My teammates will never believe I was capable of putting this many sentences together at one time.'

Kevin Seitzer, 3rd Baseman, Major League Baseball

Another AK physician who successfully treated Olympians was Dr. John Moore who treated Jenny Thompson at the 2000 Sydney Olympics (one of the greatest relay swimmers of all time). Dr. Moore worked with the Stanford Women's Swimming team for nearly a decade, and was invited to work with the US Olympic team in Sydney. He also was invited to work with Olympians from Brazil, Sweden, Spain, Mexico, Canada and Trinidad. He observes that athletes from non-American countries seem to be more open to AK methods of treatment than athletes from the United States, '*probably because they haven't been brainwashed by as much advertising from drug companies.*'

Dr. John Moore and Olympian Jenny Thompson

Jenny Thompson told *The International Journal of Applied Kinesiology and Kinesiologic Medicine* (2001):

'*AK has helped me in my career by keeping my muscles balanced and strong. I have had nagging shoulder and neck pains that have been totally controlled and cured through AK; it has helped to keep my body functioning maximally for the past 7 years. I am a 27 year old who trains up to six hours per day. For me to stay injury free for so long is pretty amazing.*'

Dr. Robert Blaich (ICAK USA Diplomate) began working with World Class and Olympic level bicyclists in 1982. The *Colorado Chiropractic Associatio*n chose him to be the first Doctor of Chiropractic on the Medical Staff of the *Coors International Bicycle Classic*. The C*oors Classic* was a rugged and demanding two-week long bicycle race through the Rocky Mountains and many cities throughout Colorado.

It was much like moving to a new town and starting a practice when no one knows who you are or what you do. His reception was mixed from other members of the Medical Staff, but Dr. Blaich

built quite a following by using AK to treat the cyclists. Word of his successes spread among the riders, such that by the end of the 1982 race, he had performed more treatments than the rest of the Medical Staff combined, which included 5 M.D.'s and several physical therapists.

While he dealt with many structural problems, especially back, knee, neck, it was enlightening to see the extent of metabolic problems that are common among cyclists in an endurance event such as this. It was also surprising how little was known about healthy diets and nutritional supplements.

After the 1982 race, Dr. Blaich was invited to return to the *Coors Classic* on a permanent basis. He came prepared for the 1983 with nutritional supplements that he was able to test and provide for many of the riders. At a time when athletes were mostly on high carbohydrate and low fat diets, AK testing revealed that most of the riders were deficient in essential fatty acids. The supplementation with specific nutrients added an additional dimension to their performance. He wasn't just treating them for pain, he was helping them to ride faster, longer, and stay healthy in the process.

The 1984 *Coors Classic* was unique in that it was held in the weeks preceding the 1984 , and the only participants were the Olympic teams from each country, using it as preparation for the Olympics. During the first week of the Classic, he treated the Dutch and Irish teams, a variety from other countries, and numerous Americans. Dr. Blaich's policy was that as the Olympic Road Race got closer, he would only treat American riders. He was working closely with an American rider from Aspen, Colorado, named Alexi Grewal. Alexi had a history of asthma, and Blaich was able to help him considerably in 1983 and 84 with AK tools.

Dr. Robert Blaich and Alexi Grewal

In the week before the Olympic Road Race, which took place in Mission Viejo, California, Alexi was having difficulty with his breathing. The air quality was not the best plus there and had been a huge stressful event in the later stage of the *Coors Classic* where Alexi was disqualified and unable to finish the race, due to an illegal substance that was found in his urine. A massage therapist had recommended an herbal tea to Alexi, which he consumed not knowing it contained an amphetamine.

The race was on Sunday, the opening day of the 1984 Olympic Games. The Friday treatment was extensive, involving many AK procedures for structural, biochemical, and emotional factors. He exhibited a unique adrenal pattern, which Blaich was able to resolve with a suggestion from Dr. Goodheart.

When Blaich rechecked Alexi on Saturday, he tested much improved and only required some minor treatment. He was taking the supplements exactly as recommended, and was in great condition for the following day's race.

Sunday's Olympic Road Race was about 120 miles, 10 laps of a 12 mile course that had numerous hills and steep climbs, with the temperature in the 90's. As the race progressed, Alexi positioned himself well and was consistently able to stay in the lead group of riders. While other riders were consuming traditional candy bars and soft drinks for fuel during the race, Alexi consumed rice cakes and diluted apple juice. Several hours into the race that lasted almost 5 hours, many of the top contenders were dropping out of the race from overheating. Dr. Blaich had done Dr. Richard Shroeder's technique to prevent overheating and Alexi was enduring the heat fairly well.

The final lap of the race was a duel between Alexi and a Canadian rider, Steve Bauer, who was in the lead. In the final 100 meters, Alexi was able to outsprint Steve to the finish line and win the Gold Medal for the United States. This was the first medal of and kind for the US in men's cycling since 1912, and very special that it was Gold.

Alexi's asthma did not interfere with his brilliant performance and his Gold Medal Victory. Immediately after the medal ceremony, Alexi gave Dr. Blaich a huge hug and said, '*Thanks, I needed your help*.'

When Blaich visited Alexi the following day, Blaich was hoping to get a picture of the two of them with the gold Medal. Before he even got to ask, Alexi put the Gold Medal around my neck and said, '*Let's take some pictures!*'

Blaich said '*if we look happy here, it's because we felt like we conquered the world….and we did*.'

Alexi was very grateful to Dr. Blaich and gave credit to *Applied Kinesiology* for his spectacular performance. For Blaich, Alexi's victory was especially sweet. It was a day when AK, proper use of legal supplements, and healthy eating all came from being considered "'fringe' to the mainstream.

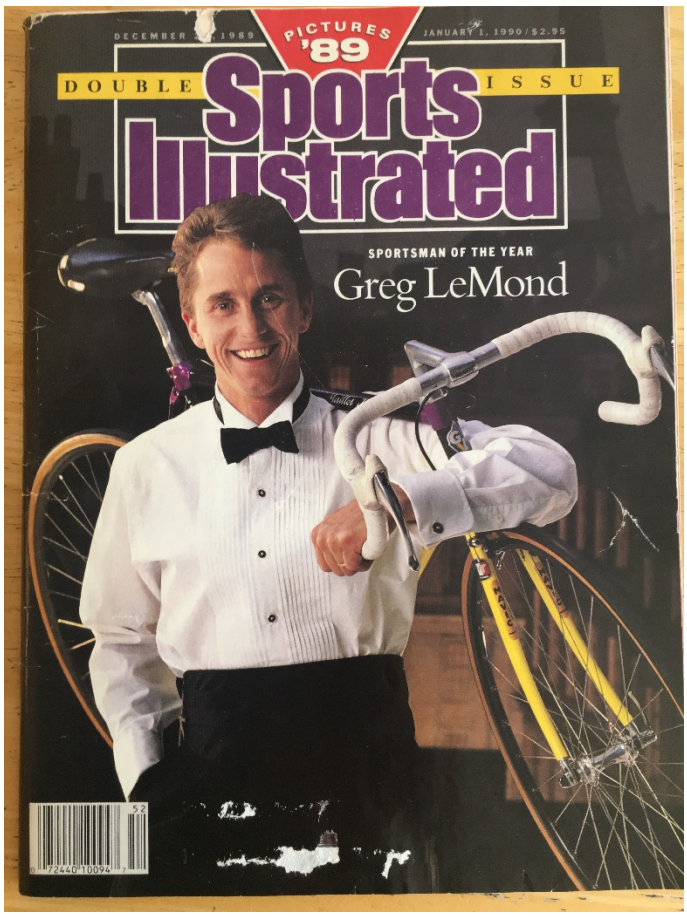
Blaich continued on the Medical Staff of the *Coors Classic* from 1985 through 1988, the final year of the event. Through Blaich's efforts in 1985, the Medical Staff got restructured and renamed. It became the '*Health Services Team*' with 3 branches, the Doping, Medical, and Chiropractic divisions.

In 1987, Blaich was invited by the coach of the US Cycling team to the training camp to give a presentation on AK and to treat many of the younger, up-and-coming Olympians.

I n 1989, Blaich was invited to become a team doctor for the *Coors Lite Team.* This was especially exciting, because the team consisted of Alexi, several of the other top cyclists in the world, and Greg LeMond, the first American to win the *Tour de France*. Greg won the Tour in 1986 and was unfortunately shot in a hunting accident in the spring of 1987. He recovered from this near-fatal accident and tried to make a come-back in 1988, but was plagued with inflammatory problems.

In May of 1989, Blaich treated Greg several times, using AK to do major re-sets on his nervous system. He also put him on a regimen of 5 supplements, which he continued to take for the next several months.

At the Tour de France in July of 1989, Greg truly made the come-back of the century when he went into the final day of the race 30 seconds behind and made up enough time to win the 22 day race of over 2,000 miles by a margin of 8 seconds.



Greg LeMond on Sports Illustrated Cover

Applied Kinesiology in Dentistry

Applied Kinesiology offers dentistry substantial reasons for incorporation of this practice into dental practice because it is able to show substantial effects on the total health and function of the individual owing to minute changes within the oral cavity.

Applied Kinesiology and Dentistry in Europe
(by Dr. Rudolf Meierhöfer)

In the early 1990s, ICAK Diplomates Dr. Wolfgang Gerz, from Munich and Dr. Hans Garten founded the ICAK–D (Germany).

Dr. Gerz included dental applications like material testing, structural analysis in cranio-mandibular dysfunction in his teaching program.

Shortly thereafter, an engaged group, coming from different sections of dental medicine (oral-surgeons and TMJ specialists), orthodontists and general dentists discovered the new AK possibilities. These dental physicians were inspired not only by the ideas of AK but also by the positive results of this new method. Over the next few years these new methods of examination were discussed in professional meetings and were researched in ever larger numbers of clinical seminars.

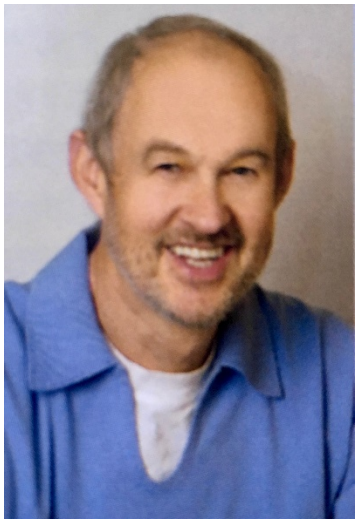
This movement in European medicine was confirmed in 1993 with the founding of the '*International Medical Society of Applied Kinesiology* (IMAK)' and created an important push for *Applied Kinesiology*'s integration into medicine and dental medicine.

Their task was now to manage the recognition of an official additional training in AK by the Austrian medical and dental Council.

In 1997 Dr. Rudolf Meierhöfer (a charter AK Dental Diplomate in Germany) passed the Clinical Competence Test as first dentist, taught, trained and examined by the Diplomates Wolfgang Gerz, Jeff Farkas and Hans Garten.

Continuously encouraged by Dr. Wolfgang Gerz, AK dental research went forward, e.g. oral testing of dental material, developing different methods of examination for dental foci and their consequences on the whole body function, and above all the structural consequences of craniomandibular dysfunctions. Physiotherapists, medical doctors and dentists formed these working teams.

The developing clinical techniques from Drs. Goodheart, Walther, and Meersseman regarding AK dental diagnostics were checked by these European clinical- scientists. If possible to reproduce it was integrated into the diagnostic and therapeutic spectrum of AK and also further developed.



Dr. Rudolf Meierhöfer

Dr Meierhöfer experimented with therapy localization to inflamed gum pockets, and carried out laboratory studies that reproducibly confirmed the possibility of several AK testing methodologies. With this method he could treat periodontal sickness better with oral tested orthomolecular medicine which is today standard in many dental practices and also in the dental AK teaching material.

A decade after AK was introduced to this group of engaged dentists in Europe, many new ideas, clinical finesse and practical knowledge arose.

Two questions came up:

a) How to teach all the future applicants on the base of the same source?

b) How to examine all the new dentists and 'create' new diplomats since the knowledge did not yet exist in tested examination questions?

The first AK textbook in German '*Lehrbuch der Applied- Kinesiology*' written by W. Gerz, summarized all the knowledge of that time and was a good solution to the problems seen above.

The popularity of the AK in dentistry was noticed internationally, and so Dr. Rudolf Meierhöfer received the title '*Charter Dental Diplomate*' in Melbourne 2002.

Dr. Meierhöfer was the one who worked on 100 new AK Dental examination questions, and revised them with AK experts and so created a new basis for dental AK examination. Dr. Meierhofer was helped in this project by intensive mail exchange the commitment of Dr. Cecilia

Duffy – the former secretary of *ICAK International Board of Examiners* – the basis for exams of Dental Diplomates -- ICAC was created.

The interest in *Applied Kinesiology* in dentists groups grew further in Europe in the 1990s. Government accreditation of *Applied Kinesiology* as an independent health specialty has begun in Austria. Drs. Meierhöfer, Gerz, and the new Austrian Diplomates started to organize courses in Germany, Austria and Switzerland. The number of dentist members with ICAK-D training increased during that time in to over 300 members.

From the increased number of AK candidates Dr. U. Angermaier (Roth) and DDr. Margit Riedl-Hohenberger (Innsbruck) showed extreme engagement in AK and consequently both passed 2006 their dental diploma examination.

DDr. Riedl-Hohenberger and Dr. U. Angermaier

DDr. Riedl-Hohenberger worked successfully on lab-based studies of reproduction of AK testing of dental materials. This research was published continuously in the Austrian Trade Press.

A little later the results of this fast development of AK technology in dental medicine were published for the ICAK meeting in Berlin with the article '*AK Dental Diagnosis*' in German and translated into English as well.

For many years these dental Diplomates organized in different German cities and in Austria AK seminars which offers trainees the AK dental-medical diploma of IMAK. As mentioned, the medical and dental associations of Austria recognized this diploma.

In 2010 IMAK and the '*German medical society of Applied Kinesiology*' (DÄGAK) joined forces and the new group of Diplomates brought in a lot of ideas and worked together for a uniform curriculum in AK for all German speaking countries - and potentially in the future for all AK courses in Europe.

The aim of present dental AK representatives in the German world is to spread this positive development from the German speaking area and to attain international recognition.

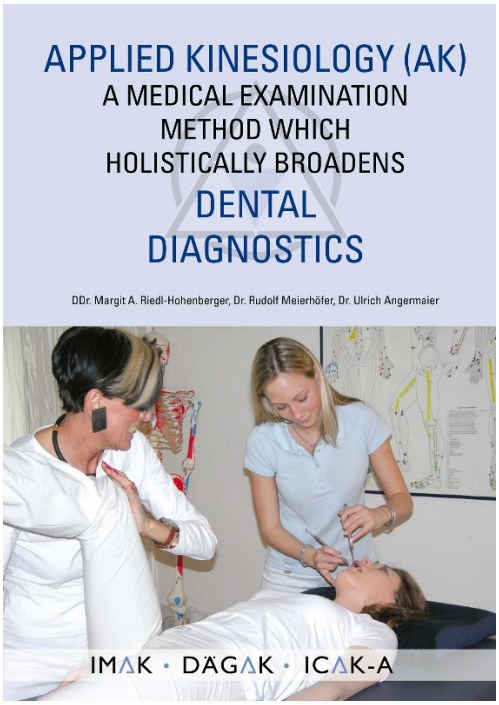
The number of patients showing vague symptoms, suffering from unclear complaints, which have been existing chronically for years and are resistant to therapy, has increased steadily over recent years. Many of these patients with chronic diseases do not show a clear pattern that could be categorized according to mainstream medicine. Many treatment methods which have been successful over many decades don't work as effectively as they once did, in spite of using better materials and improved instruments.

Standard diagnostics, such as inspection, palpation, x-ray, laboratory tests, etc. are not sensitive enough to deal with chronic diseases. Therefore the amount of unanswered clinical questions grows steadily. This is as unsatisfying for dentists as for patients.

Especially in dentistry most of the knowledge is the result of '*trial and error*.' For example, when dealing with inflammation, the dentist prescribes an antibiotics which he thinks will work and if it doesn't he prescribes another one and so on.

Therefore it is now more necessary than ever to make use of complementary, bioenergetic examination methods. Here *Applied Kinesiology* is an ideal diagnostic method. It enables us to examine the basic state of the body's reactions to various forms of sensory-motor stimulation without using invasive, potentially toxic, and expensive medical equipment. Using different challenges, we can expand as well as refine the standard diagnostic possibilities underlying our patient's problem. Once we have translated the patient symptoms into muscle language, we are able to find the best remedy. So we are able to decide which among a host of treatment options is the most valuable therapy.

Few groups of medical practitioners introduce as many different materials into the human body as dentists. Experience has shown that every field of medicine deals with symptoms that have their origin in incompatible dental materials. Material incompatibilities are caused by immune mechanisms, primarily type 1, that is acute responses and type IV, that is delayed responses. It should be an essential motive for the responsibly practicing dentist to clarify in advance whether a pathophysiological reaction can be expected to a newly introduced dental material, or already incorporated, in order to save the patient unwelcome consequences through immune responses. It should be taken into account that every incompatible material can constitute a trigger for chronic inflammations, as it will interact with the organism itself as well as with all foreign materials already present in the body. In this way, inflammatory irritations may be triggered or already existing complaints accelerated and amplified.



From Riedl-Hohenberger, Meierhofer R, Angemaier U. Applied Kinesiology (AK): Amedical examination method which holistically broadens dental diagnostics. DAGAK.

Applied Kinesiology provides us an expedient, inexpensive, and reproducible method to predict the reaction of the patient's immune system to a dental material before incorporating it. First we need small pieces of each material that should be introduced. These test bodies have to be produced exactly the same way they are introduced later into the patient's mouth. That means acrylics have to be prepared with all bonding agents and then polymerized in the same way they will be polymerized chair side. Metal alloys have to be casted and processed with ceramics or acrylics and color painted the same way as they will be introduced. The same applies to zirconium, ceramics, temporary materials and cements.

Amalgam incompatibility using AK is easily done with different types of MMT. (36) For the pre-test the patient gets the test substance on his tongue for about a minute. If a normoreactive indicator muscle stays normoreactive after that time the material seems to be compatible to the patient's immune system. Any dysreaction hints at intolerance. To exclude a type IV allergy on a high level of validity (over 90%), the patient has to take the material into his mouth for 5 to 10 minutes each day for a period of one week (in patients with many allergies even two weeks). After that period of exposure, the clinician repeats the muscle test. If the normoreactive indicator muscle stays normoreactive, the material is considered compatible for the patient and can be used. But no test (not even the laboratory test) can predict what will be in the future.

Dental materials which are already present in the patient's mouth and which are suspected to be causing problems can only be tested by use of homoeopathically processed test substances (potentized dental materials).

First it is necessary to check the muscles that are functionally correlated with the estimated problem for inhibitions in the clear. If there aren't any you have to check the associated neurolymphatic reflexes by therapy localization or challenge. In case of dysreactions, bring the potentized dental material into contact with the patient's skin and test the muscle again. If it becomes normoreactive the suspicion that the dental material is intolerant is confirmed. For forensic reasons the result has to be confirmed by a laboratory test. But this becomes much easier now that you know now what you are searching for.

Depending on the dental material there can be immunological or toxic problems. Toxicological problems are verified best by saliva, blood or urine tests. Immunological problems are verified best by lymphocyte transformation test or basophile degranulation blood tests.

Testing for infections and pathologies (foci)

The theory that focal occult infections can mediate systemic inflammatory and degenerative effects was first proposed in the 1920s. (36, 37, 38) Though discounted for many decades, the focal infection theory of systemic disease is becoming once more better established. (39) The most recognizable example here is periodontal disease being a risk factor for systemic inflammation and related degenerative diseases, such as cardiovascular disease. (40)

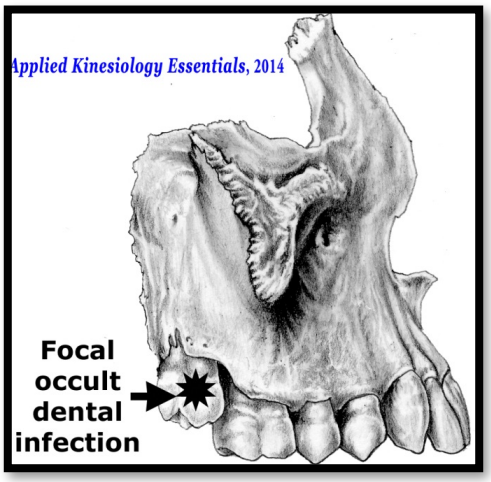
One study of periodontal disease indicated a causative role for systemic inflammatory markers through the lowering of CRP, interleukin-6 (IL-6), and LDL cholesterol levels from baseline after two months of periodontal therapy. (41) It is possible to trace bacteria recovered from peripheral blood to occult focal infection in tooth apices after a root canal, and it has been suggested that the resultant bacteraemia and circulating endotoxins may have systemic effects. (42)

The *Medical Journal of Applied Kinesiology* (43) published reports from dentists and other clinicians in the German-speaking world on this subject and has produced an impressive compendium of the AK diagnostic findings in cases of focal occult infections and their treatment.

The problem is that almost all chronic inflammations in the dental area stay silent for a very long period. Even radiological changes caused by these inflammations get visible only at a certain stage of osseous destruction. Add to this some foci have no radiological signs. So in many cases

Applied Kinesiology is the only method to detect these silent inflammations and the only method which is able to detect correlations between foci and symptoms which can be located over the whole body (double therapy localization).

First you test one muscle belonging to each meridian in the clear. All unilateral dysreactions, which are not caused by local muscular problems, are under suspicion to be caused by a focus. Then using a normoreactive indicator muscle you have to check all the suspicious dental areas by therapy localization or challenge. If the indicator muscle gets dysreactive there is something wrong at this area. To find out what it is you have to use homoeopathically processed test substances (i.e. Kieferostitis D6) or allopathic remedies (antibiotics). Bring them onto the skin (homeopathy), or into the mouth (antibiotics) of the patient and retest if there is a normoreaction again.



Applied Kinesiology and Craniomandibular Dysfunction (CMD)

The stomatognathic system and the rest of the body exist as integral components of our neuromuscular system and cannot function without the influence of muscle agonists and antagonists. The use of AK helps to diagnose the disruptive influences present within the stomatognathic system.

Malocclusion is always associated with altered cervical neuromuscular function and postural mechanics.

Craniomandibular problems result in a tendency for neck problems, such as a cervical subluxation or fixation: for holistic treatment, both elements of a patient with craniomandibular dysfunction (the dental and the musculoskeletal) must be addressed for improved outcomes. Bergamini et al showed the specifics of the integration of the stomatognathic system with the craniomandibular muscular system. (44, 45)

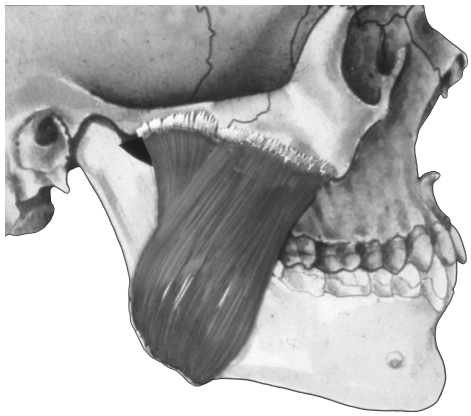
An AK Clinical Algorithm for Management of Temporomandibular Joint Disorder

Starting with a comprehensive medical history, inspection, palpation and an orthopedic examination, *Applied Kinesiology* enables the clinician to find out if patient's symptoms are caused by a weight bearing (ascending) problem, or a bite (descending) problem or a mixture of the two. Moreover it is very easy to check if the TMJ itself has a problem and if the mandible is in a 3-dimensionally correct position. If not, you have to fix the mandible in the correct position with a dental splint. This correct position can be found and then confirmed to be effective by *Applied Kinesiology*. (46)

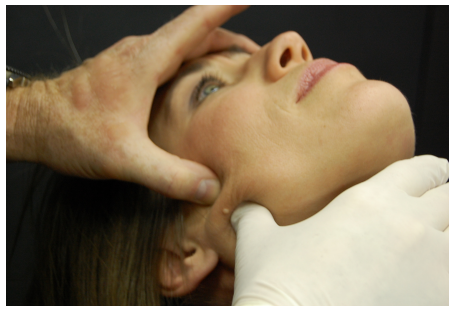
- TL to TMJ with jaw movement indicates some type of problem with the muscles of the TMJ. Find which side is involved by TL one side at a time. Determine if there is an opening or closing problem by testing in open and closed position after movement of TMJ.
- Positive therapy localization (TL) without TMJ motion indicates possible TMJ pathology (Gelb, 1994; Walther, 1983; Goodheart, 1977)
- When testing TMJ, test with neck both flexed and extended

(In picture, gluteus medius is manual muscle tested during procedure)

- Jaw opening positive indicates external pterygoid muscle involvement.
- Jaw closing positive indicates masster-buccinator-temporalis muscle involvement



- Sensorimotor challenges to diagnose other muscular causes of TMJ problems:
  - Swallowing
  - Lateral motion of jaw
  - Phonation
  - Chewing
  - Weight-bearing
  - Retrusion



Neuromuscular spindle cell treatment to masseter-buccinator

- Forceful opening of jaw with TL causing strong indicator muscle to weaken indicates the need for fascial release technique.
- If repeated stretching of the TMJ muscles produces weakness in strong indicator muscles, then an assessment of the muscle stretch reaction involving all the muscles of the body should be done. If positive globally, folic acid-B12 supplementation is considered for myofascial gelosis. (Cuthbert, 2002; Travell & Simons, 1983)

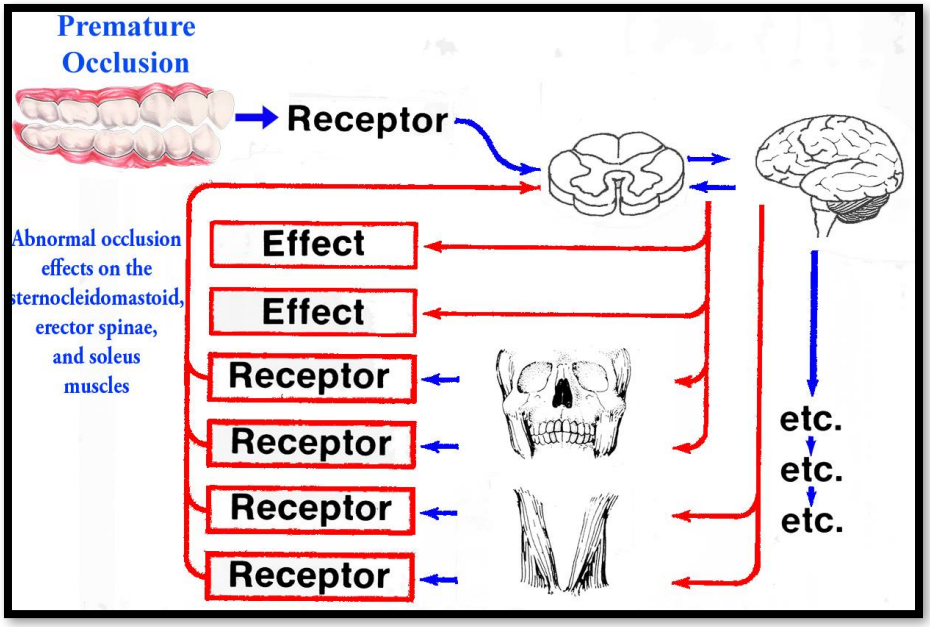
- Return of TMJ problem with chewing indicates need for dental referral for equilibration of occlusion, or for further cranial fault correction. Severe adverse interplay between TMJ and cranial faults may need dental co-management with splint therapy to balance equilibration while cranial corrections are being stabilized, and finally dental equilibration of teeth if TMJ symptoms or impairments continue.

If positive challenge to the TMJ remains, foot and ankle problems should be checked against MMT findings in TMJ.

All muscles and joints associated with the TMD have not been corrected, e.g. SCM, *gluteus maximus*, neck *extensors*, etc.

Occlusal dysfunction that may require dental co-management: test by having the patient chew and bite down hard and then reexamine for cranial faults to determine if they return.

- Evaluate craniofacial muscles for imbalances perpetuating stomatognathic problems.
- Patient chewing gum may conceal cranial faults or TMJ involvement during MMT.



Applied Kinesiology and Peridontal Disease

More and more studies prove that periodontal disease is not only a problem of bacteria but also an immune problem. And it is well known that vitamins, minerals and trace elements have positive effects on the immune system. With *Applied Kinesiology* you don't have to give them all as is so frequently done with trial and error. You are able to test which substances the body needs to rebuild bone and periodontal tissue.

Willie May, DDS

Dr. Goodheart brought Dr. May's work (for 'increasing the vertical' with a dental appliance, that coincidentally helped many patients with systemic health disorders) to wider attention.

Dr. George A. Eversaul published '*Dental Kinesiology*' in 1977, and listed 7 reasons that dentists should employ AK procedures in their dental practices.

1. Increasing accessibility to the oral cavity. AK procedures allow the doctor to increase the degree of mouth opening.
2. Decreasing muscle spasm and pain following treatment.
3. Reducing jaw clicking and/or bruxism.
4. As a prepping procedure for prosthodontic appliances.
5. Increasing patient endurance
6. Increasing patient motivation.
7. Identification of bad tooth endodontically.

Harold Gelb, DDS, MS

In 1985 Dr. Harold Gelb founded the *Craniomandibular Pain Center* at *Tufts University College of Dental Medicine* in Boston, Massachusetts. He was Clinical Professor at the *Department of Restorative Dentistry* in the *University of Medicine & Dentistry of New Jersey*, from 1971 to 1991. He was the Director of the *Temporomandibular Joint Clinic* at the *Department of Otolaryngology*, in the *New York Eye and Ear Infirmary* from 1958 to 1979.

Dr. Gelb invited Dr. Goodheart to write about *Applied Kinesiology*'s usefulness for temporomandibular disorders (TMD) in 1977. This was one of the first inter- professional offers for a chiropractor to write for a medical and dental journal.

Dr. Gelb and his team at *Tufts University* have been using manual muscle testing and the methods developed by Goodheart and the *International College of Applied Kinesiology* in the evaluation of patients with TMD ever since, and have published a substantial body of research on the relationship between muscle imbalances and TMD. (47) In a seminal paper they showed that correction of the TMJ can enhance muscular strength and athletic performance. (48)

Harold Gelb and Norwegian and British Dentists at the 1995 International ICAK Conference, Monte Carlo

Gelb saw the advantages for using Goodheart's advances in MMT to assist the orthodontist in the difficult task of diagnosis in the oral cavity. Here a millimeter of dysfunction or malocclusion is a great expanse and functional challenges of movement and fit, particularly once the motility of the cranio-sacral system is taken into account.

These issues often confound the difficult task relating both to craniomandibular function. Gelb eagerly embraced the wide-ranging diagnostic abilities of AK.

In 1994 Gelb invited Dr. Walther to contribute a chapter to his book '*New concepts in craniomandibular and chronic pain management*', and it was titled '*Applied Kinesiology and the Stomatognathic System*'.

Drs. Aelred Fonder and Robert Ricketts, DDS contributed to Walther's Volume II on the stomatognathic system. Dr. Fonder demonstrated the influence of the stomatognathic system on body balance and the spine by changing the occlusion and mandibular position. He contributed dozens of full spine x-ray images to Walther's textbook showing how spinal x- rays taken before and after the equilibration and mandibular repositioning show specific postural improvements. (49) Clinical changes are often seen throughout the body after making changes in the masticatory system. This shows how the structures within the stomatognathic system are integrated with each other, and how the system is related to total body activity.

Echoing the discoveries made in AK regarding the importance of the stomatognathic system, Hans Selye, MD stated in his introduction to Fonder's book, '*I fully support his plea to dentists to realize that they are treating persons who are united wholes, not simply a complex of dental and periodontal tissues.*'

According to the orthodontist Gerard Smith, DDS: '*Entering the field of physiologic dentistry, the dentist must become knowledgeable of the reciprocal inter-relationships between the jaw and the Cranio-Sacral mechanism. The dentist must also learn the effects functional appliances have on the Cranium and Cervical Vertebrae. Discerning these major faults guide the order of treatment and the type of appliances to be used*'. (50)

Finally, Dr. Gelb offers these glowing words on the promise of AK for the dental profession: (51)

'W*e believe that medical and dental specialists will use Applied Kinesiological testing to make more accurate diagnosis and provide better treatment. But that is a futuristic thought.'*

Applied Kinesiology in Traditional Chinese Medicine

The relationship between internal glands and organs of the body to the external muscle groups and acupuncture meridians opened whole new vistas for AK therapeutics and has been one of the most popular aspects of AK in the wider world.

While the study of energy movement in the body has gone on for thousands of years in the Orient, recent discoveries in the West have added to these tools of diagnosis and treatment. Muscle testing has a special feature to bring to the acupuncture field. Out of all the recent refinements (electro-acupuncture, laser acupuncture, computer diagnosis, etc.), MMT is unique in that it requires no electricity or instruments. This offers simplicity in the office, and ease when away from it. Muscle testing for this reason has become a normal part of many acupuncturists practice. (52. 53, 54, 55, 56, 57, 58, 59, 60) It is because muscle testing interacts with the acupuncture meridian system that the usefulness of the *Applied Kinesiology* approach for acupuncture diagnosis is presented.

How does this new tool enable us to broaden our understanding of the ancient art of Chinese diagnosis? What are the practical applications? TCM, as with any complete system, is large enough so that within itself it contains its own contradictions. For instance, often there is a reluctance to learn and use the 5-Element law in acupuncture practice due to the uncertainty that

exists around pulse diagnosis. While pulse taking offers many of the body's secrets in TCM thinking, it takes years to become proficient in order to be able to hear those secrets. Long before the subtleties can be appreciated, however, the basic pulse at the wrist must be read. This informs the TCM clinician of a state of too much or too little energy, or the relative balance of energies in the body. This pulse diagnosis is done for each of the meridians.

Regarding pulse point technique, the current pulses were not introduced until the Han Dynasty in the great text the Nan Jing. Before this the pulses were taken at different acupoints with multiple points for each meridian. The newer pulse points are locations on the radial artery, not actual acupoints, where the pulses are palpated to determine their nature for diagnosis. (58) Thus, some AK practitioners prefer to go directly to alarm points to determine which one strengthens an inhibited muscle if it has an acupuncture relationship. With basic knowledge of meridian dynamics this is still very rapid.

Another way to diagnose the meridian energies pulsing through the wrist is through the simple technique of muscle testing. Through systematic testing and comparison of individual muscles, the clinician who understands the positions of the pulse points at the wrist can estimate the flow of Qi along separate meridians. MMT offers immediate feedback for the doctor and the patient so that one can already begin using the many complex approaches in TCM like the 5-Element law while, at the same time, learning pulse diagnosis. This method of incorporating the complexities of TCM into the contemporary practitioner's use of CAM is common. (55)

Muscle testing offers a simple tool to read the energetic from the physical. In reading the pulses with the MMT, the current energetic and meridian state of the organism is reported, only in a new form. The pattern of muscle-organ/gland association of the meridians often parallel the relation previously noted with Chapman's and Bennett's reflexes, thus enhancing all of the viscerosomatic relationships. This, along with many associated clinical observations, established the muscle-organ/gland association of *Applied Kinesiology*. The discovery of the relationship between meridians and meridian points to muscles and muscle groups and their shared visceral connections serve to further support the muscle-organ correlations developed in AK. (20, 59)

Dale lists the six principal clinical methods of diagnosing an aberrant acupuncture point, two of which include the MMT: (54)

1. Tenderness and response to palpation (traditional TCM)
2. Observation of changes in skin color or texture (traditional TCM)
3. Significant change in the electro-permeability of the acupuncture point (Voll, Nakatani, Motoyama)
4. A sudden increase in vascular response at the radial artery when the acupuncture point is aroused (Nogier's vascular-autonomic signal)
5. A significant alteration of muscle testing strength when an acupuncture point is therapy localized, that is, touched (the *Applied Kinesiology*'s approach), and
6. The bi-digital O-Ring test, a scientifically investigated variation of the AK MMT, specifically employing the opponens pollicis muscle (Omura, 1981)

Goodheart introduced meridian therapy into the AK syllabus and wider chiropractic profession in 1966,(60) after noting that imbalances in the meridians could influence the function of the muscular system. Many principles and philosophies from TCM were then added to AK, and AK approaches were added to TCM diagnosis and management, to complement the existing procedures. (13) It is important to note that Goodheart incorporated concepts from TCM that were most important to the AK paradigm and chiropractic profession. For example methods of point stimulation such as acupressure, teishin and manual tapping, are promoted instead of

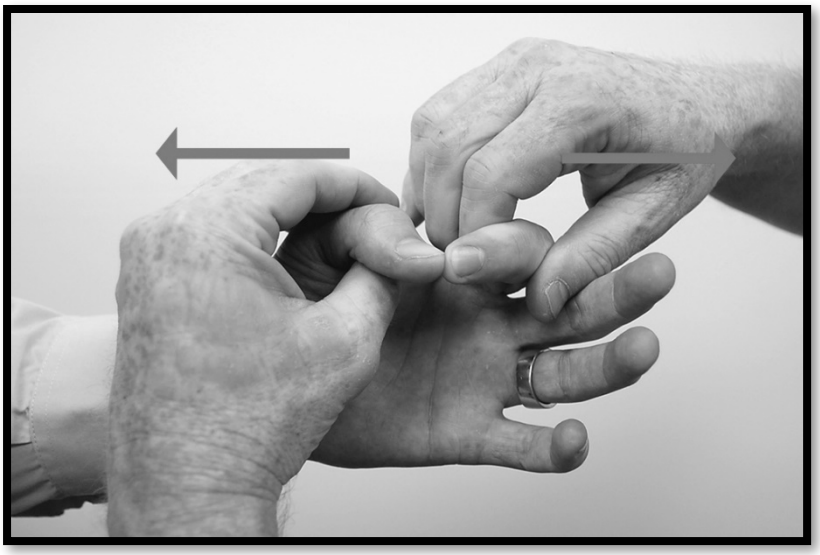
needling techniques. In fact most AK doctors do not use needle acupuncture in practice, but many of them were found to use non-invasive acupuncture treatment. (61)

Medical scholars of the western world believed chiropractic to be little more than a simple biomechanical application with an instinctive (or placebo, ideomotor) action.

However, the work of Goodheart continued to grow over the next 50 years with astounding results to become one of the most used diagnostic techniques in alternative medicine. If the clinical results remained genuine, theories accepted by the most distinguished and established medical authorities would have to be questioned or discarded. After all, chiropractic and osteopathy are just gaining some recognition of legitimacy in the scientific world after 116 years of clinical history and efficiency.

Controlled clinical trials have discovered that, when a muscle is weak, it can sometimes be strengthened by stimulating the classic acupuncture tonification point for a certain meridian. (62) If the muscle is hypertonic, stimulating the sedation point of the same meridian will bring the muscle back to normal. Moncayo & Moncayo are endocrinologists trained in AK musculoskeletal and endocrinology, who have published a number of papers showing that the AK MMT can diagnose and properly guide acupuncture treatment for patients with endocrine dysfunctions as detected by musculoskeletal examination findings and confirmed by blood testing. (63)

Costa and Araujo (64) demonstrated one of the approaches used in *Applied Kinesiology* for decades in evaluating the meridian system. They showed that stimulation of the sedation point for the Bladder meridian (acupuncture point Stomach-36) induced decreased strength in the tibialis anterior muscle as measured by electromyography. The tibialis anterior muscle corresponds to the Bladder meridian in AK.



The Bi-Digital O-Ring test of Dr. Yoshiaki Omura

In the late 1970's Yoshiaki Omura (a medical doctor and electrical engineer) developed a method of TCM assessment (using the AK approaches of MMT and TL) that have been utilized in Western medicine, dentistry, veterinary and Oriental medicine. (65) Dr. Omura visited Dr. Goodheart in his office in the 1980s and observed him. (Schmitt, personal communication) Omura has 44 Indexed papers listed in PubMed regarding the effects of Qi and other subtle energy fields and acupuncture areas and points upon the MMT.

Omura noticed that when a slight pressure was applied to skin areas, often related to previous pain, that a decrease in grip strength was observed. Omura noticed that it was possible to test a

subject's resistance to having their thumb and finger pried apart from one another when they only held their fingers 'tip-to-tip', in opposition to each other. This is the characteristic Bi-digital O-Ring Test (BDORT) for which this method is named. Omura expanded this observation by noting that a patient's O-ring strength could change during contact with various test substances, e.g. specific nutrients, chemicals, pathogens, toxins, etc. He also found that a patient's fingers could more easily be pulled apart during his O-ring testing when the patient came in contact with 'unhealthful' items. Conversely, when in contact with 'healthful' items, the original finger strength would be maintained.

Following the work of Goodheart, Omura showed (56, 57) that when a patient touched their Alarm or Mu point of an organ while simultaneously holding a substance suspected to be toxic to that organ, the BDORT showed a weakening response.

In addition to many journal articles chronicling his observations regarding the BDORT and its usefulness for other diagnostic problems, Omura published two books in Spanish on the BDORT and one in Japanese. A synopsis has also been published of this method, by an electrical engineer who worked with Omura for 20 years. (66) Losco records that '*The O-ring test is presently being used by many physicians around the world and it is being taught in some medical schools in Japan, Finland and Venezuela*'.

It is fascinating to discover the ripple effect of Goodheart's work extending so far in TCM, to encompass so many cultures and languages. Of course, the BDORT is only a small component of the vast collection of innovative AK methods now used by practitioners who use TCM. However, Omura's crediting Goodheart with many of his innovations in this area is noteworthy.

The contributions and new principles relating to AK and TCM have been used as a springboard for many other techniques and systems, including Scott Walker's Neuro- Emotional Technique, (13) John Thie's Touch for Health, (67, 68) John Diamond's Behavioral Kinesiology, (69) Roger Callahan's Thought Field Therapy, (70) Gary Craig's Emotional Freedom Techniques, (71) and Fred Gallo and Harry Vincenzi's Energy Tapping (72) (among many others) now established in the field of Complementary and Alternative Medicine.

Dr. John Thie, Chiropractor and Founder of 'Touch For Health'

Dr. Goodheart spoke and honored his former student Dr. Thie at the last Touch For Health seminar that Dr. Thie could attend before his untimely passing.

Public awareness of AK and MMT has spread worldwide by virtue of the patient education program Touch for Health (T4H), designed by ICAK Diplomate Dr. John Thie. (67) In 1970, Thie (the first chairman of the ICAKUSA) wanted 'kinesiology' to be available for the general public while Dr. Goodheart wanted to continue teaching *Applied Kinesiology* only to professionals licensed to diagnose and treat patients. Goodheart challenged Thie to write a book for the public. This policy of teaching full-scope *Applied Kinesiology* only to physicians, and the various lay-systems derived from *Applied Kinesiology* operating in parallel in their respective fields, remains to this day. Dr. Thie's books on *Touch for Health* are among the best-selling in the self-help and self-healing domains. The English text has sold over 500,000 copies and been translated into 23 languages.

Dr. Thie's vision was to develop a lay person support group like other professions had done (*American Diabetic Association, American Cancer Association, Arthritis Foundation*, and so on) with the ICAK doctors providing leadership and guidance about natural health methods and the lay part of the group supporting these efforts and spreading the word to other lay people and potential patients as other professions have so successfully done.

In 2018,'*Energetic and Specialized Kinesiologies*' are celebrating 35 years of kinesiology in German-speaking countries, 35 years of the IAK, and 30 years of the professional association *Kinesiology (TFHK) Association*'s annual conference marked 43 consecutive years of AK/TFH/ Educational Kinesiology (EduK)/ SK/ EnK conferences. Their gatherings in the USA (or under the IAK, DGAK and IKC banners in Germany, or the 5th Kinesiology Conference in Moscow, or the 2nd greater China Kinesiology conference in Shenzhen) are at least in part a celebration of the popularization of *Applied Kinesiology* around the world for lay people and non-physician clinicians.

Energy Medicine and Energy Psychology conferences continue to spread, expand and apply Energetic Kinesiology principles, though often the speakers and attendees are unaware of the roots of their work in AK, T4H or other systems of Kinesiology.

In 1975, when AK and T4H diverged, some of the ICAK physicians objected to sharing Kinesiology methods with the lay public, fearing it could be dangerous, of low quality, or result in a competing profession with a much lower standard of training. As of 2018, the lay peer-to- peer teaching model is alive and well via T4H, Educational Kinesiology, and so many other workshop that have truly spread '*Kinesiology*' throughout the world, with repeatable, similar benefits, in countless languages, cultures and settings. TFH has been taught in more than 100 countries and at least 23 languages.

A new profession of *Specialized Kinesiology* or *Energy Kinesiology* has indeed emerged from Goodheart's '*physician only*' teachings and continues to grow around the world. It has not resulted in any shortage of 'sick people' for all of the AK physicians to help! Indeed, greater mutual awareness and cross-referral will only increase the public knowledge and access to the optimum practitioner for their needs.

Drs. Goodheart and Thie lecturing to chiropractors in 1975

Perhaps Energy Psychology has done the most to publish documentation of Energy Kinesiology interventions in the peer-reviewed journals, primarily through outcome studies using Emotional Freedom Technique (EFT). EFT has probably spread the farthest and the fastest, impacting millions of lives, and enhancing the practice of many professionals (and many of them have no idea EFT has roots in Dr. Goodheart's AK and Callahan's *Thought Field Therapy* (TFT).

For so many years, literally millions of people have known for themselves that '*Kinesiology*' really works for them, but it is incumbent upon Kinesiologists to produce more orthodox, scientific evidence for its wider acceptance and further development.

Dr. John D. Diamond

John Diamond is a psychiatrist who, after he met Dr. Goodheart, became interested in the psychological and the psychiatric aspects of Applied Kinesiology, '*as I realized it could give us instant access to the unconscious.*'

Just as Sigmund Freud (1900) revealed how dreams may prove to be a 'royal road' to the unconscious mind, Dr. Diamond has shown how manual muscle testing during psychological questioning functions as another window to hidden motives and emotions. This is what makes Diamond's work so congruent with psychoanalysis and *Applied Kinesiology*. The principles of MMT developed in *Applied Kinesiology* were adapted by John Diamond in his book *Behavioral Kinesiology*, (68) and form the basis of contemporary 'energy psychology', a popularized form of these psychosocial approaches that originated in *Applied Kinesiology*. Dr. Diamond has published significant amounts of theoretical and outcomes research related to the diagnosis (using the MMT) and treatment (using psychological, meridian, nutritional, homeopathic, and manual methods) of psychosocial disorders. A review of his writings and research should be made by anyone wishing to expand their knowledge in the area of psychosocial dysfunction.

Dr. John Diamond was the first medical clinician-scientist in the psychological field to use and scientifically write about the meridian system's influence on human psychological behavior and the link between the acupuncture meridians and emotions. Diamond is a psychiatrist and past president of the *International Academy of Preventive Medicine*, and was critical in bringing many leaders in the field of C.A.M. to Goodheart's attention, as well as bringing Goodheart's work to many leaders in the C.A.M. community.

Diamond's pioneering concepts, together with some of the concepts developed by Goodheart in *Applied Kinesiology*, form the basis on which a new method of holistic psychology developed, and from his work the new field of '*energy psychotherapy*' emerged. (69, 72)

Dr. Diamond with Dr. Goodheart

Dr. Goodheart said '*Dr. John Diamond has been a friend and physician colleague for over thirty years. He alone deserves a Nobel Prize for his accurate observations on the acupuncture meridians and emotions*.' From his initial work Dr. Diamond has spent 35 years developing methods of diagnosing and treating what he calls '*The Acupuncture Emotional System*', associating the major positive and negative emotions with each meridian and thereby offering one possible pillar for psychosomatic medicine. In his view the acupuncture system is the communicating link between the emotions, the organs, and the muscles.

Dr. John Diamond demonstrates "psychological challenge" as used in AK with his own manual muscle test

Diamond's work also had a strong influence on the renowned osteopath Robert Fulford, D.O., with whom he corresponded. Fulford found Diamond's book Life Energy essential, (1985) and his discussion of birth trauma were critical to Dr. Fulford's development of methods to release cranial injuries in children at birth. Diamond relates issues of fear, hate, and envy that may accompany the infant's leaving the comfort of the womb. As a whole Diamond's work suggests that the body and the psyche progress in parallel during the developmental process, and that interventions aimed at improving the emotional-adaptive response to the birth experience and life traumas is fundamental for the patient's development and well-being. Diamond was instrumental in the meetings between Dr. Goodheart and Dr. Willie May, and the salutary results from this interaction have been extensively published in the biomedical and chiropractic professions.

Dr. Diamond's work was the first in the psychological field to use and scientifically write about the meridian system's influence on human behavior. His pioneering concepts, together with some of the advanced concepts in *Applied Kinesiology*, formed the basis on which the new field of '*energy psychotherapy*' developed.

A brief summary a few of the contributions of Dr. Diamond are as follows:

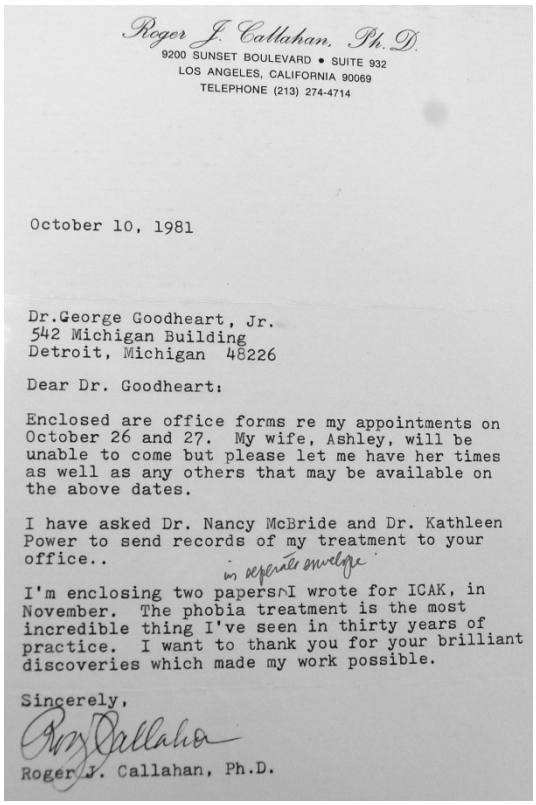
- Dr. Diamond identified the links between specific meridians and emotions.
- Dr. Diamond discovered how muscle testing of meridian, acupuncture, and alarm points could be used to identify the meridian imbalance underlying an emotional state.
- Dr. Diamond discovered how meridian imbalance may occur in layers, and how these may correspond to layers of emotions. Thus, he used muscle testing to identify the sequence of meridians that required treatment in relation to a particular emotional problem. The complexity of the human psyche was found to be reflected in the complex adaptations made by the human muscle and meridian system.

- Dr. Diamond suggested that manual muscle testing could be extended to exploring emotional truth, as well as the impact of all manner of mental stimuli upon the measurable human muscular system.
- Dr. Diamond discovered how meridians that are out of balance may be corrected by specific affirmations.
- Thus, Dr. Diamond discovered an efficient way of identifying how the meridian system is out of balance in relation to an emotional problem, fear or phobia, and how to correct this.
- Dr. Diamond also identified profound obstacles to healing, such as the '*reversal of the body's morality" (what is called "psychological reversal" in AK*).'
- Diamond's work led to profound elaborations on the use of the manual muscle test and AK approaches in many diverse but associated systems of treatment in the field of '*energy psychology*' and '*kinesiology*'.

Dr. Roger Callahan

Dr. Phil Mollon (one of the leading writers in the new field of 'energy psychotherapy') credits Dr. Goodheart with a fundamental contribution to the development of this new field of study. Dr. Mollon's history of Goodheart's contributions in this area is exhaustive. (91)

Emotional Freedom Techniques, commonly known as 'EFT,' is a popular and form of '*energy psychology*'. Its founder Gary Craig (an engineer) gives Dr. Goodheart credit for its development. Dr. Goodheart demonstrated the effect of the meridian system upon human function for Mr. Craig and his teacher Dr. Roger Callahan, and from their use of these insights, developed methods that have spread to literally millions of people around the world.



Roger J. Callahan, Ph.D.
9200 SUNSET BOULEVARD • SUITE 932
LOS ANGELES, CALIFORNIA 90069
TELEPHONE (213) 274-4714

October 10, 1981

Dr.George Goodheart, Jr.
542 Michigan Building
Detroit, Michigan 48226

Dear Dr. Goodheart:

Enclosed are office forms re my appointments on October 26 and 27. My wife, Ashley, will be unable to come but please let me have her times as well as any others that may be available on the above dates.

I have asked Dr. Nancy McBride and Dr. Kathleen Power to send records of my treatment to your office..

I'm enclosing two papers I wrote for ICAK, in November. The phobia treatment is the most incredible thing I've seen in thirty years of practice. I want to thank you for your brilliant discoveries which made my work possible.

Sincerely,

Roger J. Callahan, Ph.D.

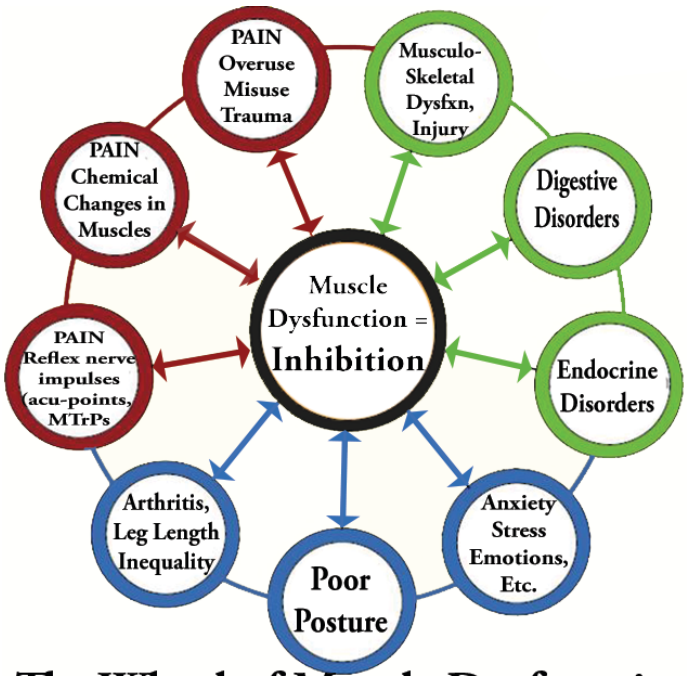
Founder of Thought Field Therapy and other mental health approaches derived from Goodheart's discoveries, Roger Callahan (above) with JoanneCallahan.

Professional Applied Kinesiology is Mapping New Territories for Chiropractic Around the World

Despite the incessant expansion, evolution and redevelopment, much of the original AK approach has stood the test of time and persists in its essentials among the hundreds of thousands of MMT practitioners around the world. The voluntary skeletal muscular system is the source and the recipient of the greatest neural activity in the body, and therefore the AK clinician is one of the most comprehensive 'diagnosticians' of human function and malfunction at work in the world today.

Dr. Goodheart and the ICAK have dedicated their lives to the future of integrative healthcare and its realization with *Applied Kinesiology*. This passion for functional diagnosis, '*diagnose the need, supply the need, observe the result*', for the most unusual and the most common patient problems has been shared at chiropractic, osteopathic, medical, and dental colleges, seminars, and lecture-tours all over North America, Europe, Australia and Asia.

Hailed as a friend and inspiration to many, Dr. Goodheart is a man to be remembered, honored, and modeled. The numbers of clinicians and healing professions that are using and developing AK demonstrate that many of the most famous doctors in the orthodox and complementary and alternative medicine world felt that '*the Goodheart's approach*' was invaluable because it focused on measurable physical factors which make up the constellation of dysfunctions affecting the person's total health picture and happiness.



The Wheel of Muscle Dysfunction:
Body-Wide Reflector of Central Nervous System Dysfunctions

Scott Cuthbert
BA, DC
Associate Editor
cranialdc@hotmail.com

Clive Lindley-Jones
DO, DIBAK

Cite: Cuthbert S, Lindley-Jones C, and contributors. A history of professional Applied Kinesiology around the world (Part II). Asia-Pacific Chiropr J. 2022;2.5. URL https://www.apcj.net/papers-issue-2-5/#CuthbertetalPAK2

References

1. Jensen AM. Estimating the prevalence of use of kinesiology-style manual muscle testing: A survey of educators. Adv Integr Med (2015).
2. Goodheart GJ. Applied Kinesiology Research Manuals. Detroit, MI: Privately published; 1964-1998. Available at: Available at: http://www.icakusa.com/products/products. php.
3. Keating J. Toward a philosophy of the science of chiropractic: a primer for clinicians. St ockton Foundation for Chiropractic Research, Stockton, CA. 1992:91.
4. Gelb H. Clinical Management of Head, Neck and TMJ Pain and Dysfunction. W.B. Saun ders, Philadelphia, PA, 1977.
5. Goodheart, GJ, Jr. 1976. Kinesiology and Dentistry. J Amer Soc Psychosomatic Disease 6:16-18.
6. Scopp A. 1979. An Experimental Evaluation of Kinesiology in Allergy and Deficiency Disease Diagnosis. Journal of Orthomolecular Psychiatry. 7(2):137-8.
7. Available at: http://appliedkinesiologyresearch.blogspot. com/, and http://icakusa.com/co ntent/research.
8. Cuthbert SC, Goodheart GJ Jr. On the reliability and validity of manual muscle testing: a literature review, Chiropr Osteopat. 2007 Mar 6;15(1):4.
9. McDowall D. The growth of Applied Kinesiology Education. Thesis paper, RMIT University.
10. Walther DS. Applied Kinesiology, Synopsis, 2nd Edition. (translated into Italian, French and Korean). Available at: http://www.icakusa.com/products/products.php.
11. Cuthbert S, Blaich R, Markham B. David S. Walther, DC, DIBAK: Scholar, Researcher, Politician and Teacher. Chiropractic History. 2013;33(1):10-27.
12. Pollard HP, Hardy KE, Curtin D. Biopsychosocial Model of Pain and Its Relevance to C hiropractors. J Chiropr Austral. 36(2):82-91.
13. Walker S. Neuro Emotional Technique. http://www. netmindbody.com/, 2019.
14. Richards DM. Once more, with feeling: The History of Neuro Emotional Technique. Chiropractic History. 32(1); Summer 2012: 34-47.
15. Rosner AL, Cuthbert SC. Applied kinesiology: distinctions in its definition and interpret ation. J Bodyw Mov Ther. 2012 Oct;16(4):464-87.
16. Hartman SE. Cranial osteopathy: its fate seems clear. Chiropr Osteopat. 2006 Jun 8;14: 10.
17. Reply to Hartman: https://chiromt.biomedcentral.com/ articles/10.1186/1746-1340-14-10/ comments.
18. Lewis. J. A.T. Still: From the dry bone to the Living Man. 2012.
19. Cuthbert S, Walther DS, et al. Applied Kinesiology: Clinical Techniques for Lower Body Dysfunctions. Available at: https://www.thegangasaspress.com/ak-lower- body/.
20. Cuthbert S, Walther DS, et al. Applied Kinesiology Essentials: The Missing Link in Health Care. Available at: https://www.thegangasaspress.com/ak-essentials/.
21. Travell JG, Simons DG. Perpetuating Factors. In: Myofascial Pain and Dysfunction: Th e Trigger Point Manual, 2nd Ed. Vol 1. Williams & Wilkins: Baltimore; 1999:103-164.
22. Mense S, Simons DG. Muscle Pain: Understanding Its Nature, Diagnosis, and Treatment. Lippincott Williams & Wilkins: Philadelphia; 2001.
23. Gerz W. Lehrbuch der Applied Kinesiology (AK) in der naturheilkundlichen Praxis. (in German). AKSE-Verlag, Munchen; 2001.

24. Garten H. Applied Kinesiology, der Lehrfilm. 1996, München: Video Commerz.
25. Garten H. Applied Kinesiology, Muskelfunktion, Dysfunktion und Therapie. 2 ed. 2012, München: Urban&Fischer, Elsevier.
26. Garten H, Weiss G. Systemische Störungen - Problemfälle lösen mit Applied Kinesiology. 2007, Urban und Fischer: München.
27. Garten H. Lehrbuch Applied Kinesiology Muskelfunktion- Dysfunction-Therapie. (in German) Urban & Fischer, Munich; 2004.
28. Gerz W. Applied Kinesiology in der naturheilkundlichen Praxis. 2000, AKSE-Verlag: Wörthsee.
29. Garten H. Das Muskeltestbuch. München: Urban & Fischer; 2007.
30. Palomar J, Isaikin AI, Svet MS, Alekseev AV. Neuroreceptor therapy. The method of pr oprioceptive-deep tendon (P-DTR) in functional neurology. From theory to practice. Rus sian Pain Magazine. 2017:82-86.
31. Day S. Sports Chiropractic: The History of Chiropractic at the Olympic Games, 1976- 2010. Chiropractic History. 2010: 30(1), 35-44.
32. Weiskopf H. The Good Hands Man: Chiropractor Leroy Perry has won ardent support among top athletes with methods that mystify and annoy M.D.s. Sports Illustrated: July 16, 1979: 34-39.
33. Article on Dr. Jean Pierre Meersseman: https://www. theguardian.com/football/2013/feb/16/milan-lab-premier- league.
34. http://www.atpworldtour.com/en/players/jack-sock/sm25/ bio.
35. Profile Dr. Craig Buhler: https://fitness.mercola.com/sites/ fitness/archive/2013/01/04/adv anced-muscle-integration- technique.aspx.
36. Ratner EJ, et al. Jawbone cavities and trigeminal and atypical facial neuralgias. Oral Su rg Oral Med Oral Pathol. 1979 Jul;48(1):3-20.
37. Lee R. Dental Infections and related Degenerative Diseases. J Am Med Assoc. 1925;84(4):254-261.
38. Lee R. Dental Infections, Oral and Systemic. Penton publishing company: Cleveland, O H; 1923.
39. Goymerac B, Woollard G. Focal infection: a new perspective on an old theory. General d entistry. 2004;52(4):357-61; quiz 362, 365-6.
40. Glickman LT, et al. Evaluation of the risk of endocarditis and other cardiovascular even ts on the basis of the severity of periodontal disease in dogs. Journal of the American Vet erinary Medical Association. 2009;234(4):486-94.
41. Somma F, et al. Oral inflammatory process and general health. Part 1: The focal infectio n and the oral inflammatory lesion. European review for medical and pharmacological s ciences. 2010;14(12):1085-95.
42. Murray CA, Saunders,WP. Root canal treatment and general health: a review of the lite rature. International endodontic journal. 2000;33(1):1-18.
43. Medical Journal of Applied Kinesiology, 2012.
44. Bergamini M, et al. Dental occlusion and body posture: a surface EMG study. Cranio. 20 08 Jan;26(1):25-32.
45. Crisera P. Cranio-Sacral Energetics: Volume 1. Privately Published: Rome; 1997.
46. Cuthbert S. Diagnostic Corner: An integrative chiropractic approach to temporomandib ular disorders. DC Tracts: Data Trace Publishing Company. 23(4); 2011:4-12.
47. Sakaguchi K, Mehta NR, Abdallah EF, Forgione AG, Hirayama H, Kawasaki T, Yokoya ma A. Examination of the relationship between mandibular position and body posture. Cranio. 2007;25(4):237-49. (Research conducted at Tufts Craniofacial Pain Center)
48. Gelb H, Mehta NR, Forgione AG. The relationship between jaw posture and muscular st rength in sports dentistry: a reappraisal. Cranio. 1996 Oct;14(4):320-5.
49. Fonder AC. The Dental Physician. Medical Dental Arts; 1985.
50. Smith G. Cranial-Dental-Sacral Complex. Privately published, Newtown, PA, 1983.
51. Gelb H, Ed. New concepts in craniomandibular and chronic pain management. Mosby- Wolfe: Times Mirror Int. Publishers Ltd. 1994.
52. Moncayo R, Moncayo H. Evaluation of Applied Kinesiology meridian techniques by mea ns of surface electromyography (sEMG): demonstration of the regulatory influence of an tique acupuncture points. Chin Med. 2009;4(1):9.
53. Gerz W, Cannengeiber C. AK Meridian System Acupuncture. Applied Kinesiology Semi nars Europe, Notes. Riga; 2005.
54. Dale RA. The Systems, Holograms and Theory of Micro- Acupuncture. Am J Acupunct. 1999;27(3-4):207-242.

55. Larson D. Physical balancing: Acupuncture and Applied Kinesiology. Am J Acupunct. 1 985;13(2):159-162.

56. Omura Y. Meridian-Like Networks of Internal Organs, Corresponding to Traditional C hinese 12 Main Meridian and Their Acupuncture Points as Detected by the Bi-Digital O- Ring Test Imaging Method: Search for the Corresponding Internal Organ of Western M edicine for Each Meridian- Part I. Acupuncture Elec. 1987;12:53-70.

57. Omura Y. New simple early diagnostic methods using Omura's "Bi-Digital O-Ring Dysf unction Localization Method" and acupuncture organ representation points, and their a pplications to the "drug & food compatibility test" for individual organs and to auricular diagnosis of internal organs--part I. Acupunct Electrother Res. 1981;6(4):239-54.

58. Amaro J. Contemporary Acupuncture Diagnosis: Electro- Meridian Diagnosis. Acupunct ure Today. 2002;3(9).

59. Corneal JM, Dick R. An attempt to quantify muscle testing using meridian therapy/acup uncture techniques. Collected Papers International College of Applied Kinesiology. Wint er, 1987:59-78.

60. Goodheart GJ, Jr. Chinese lessons for modern chiropractic. Chiro Econ. 1966;8(5).

61. Zhang J, Hambrick T, Conable K. Applied Kinesiology in Chiropractic. J Chiropr Educ. 2006;20(1):112.

62. Moncayo R, Moncayo H, Ulmer H, Kainz H. New diagnostic and therapeutic approach t o thyroid-associated orbitopathy based on Applied Kinesiology and homeopathic therapy. J Altern Complement Med. 2004;10(4):643-50.

63. Moncayo R, Moncayo H. A musculoskeletal model of low grade connective tissue inflam mation in patients with thyroid associated ophthalmopathy (TAO): the WOMED concep t of lateral tension and its general implications in disease. BMC Musculoskelet Disord. 20 07 Feb 23;8:17.

64. Costa LA, de Araujo JE. The immediate effects of local and adjacent acupuncture on the tibialis anterior muscle: a human study. Chin Med. 2008 Dec 18;3:17.

65. BDORT, 2018. http://bdort.org/.

66. Losco M. Suggestions for performing the bi-digital O-ring test. Acupun Elec. 1991;16:53-64.

67. John Thie. Touch for Health, 2018. http://www. touch4health.com/.

68. Diamond J, 2012. http://www.drjohndiamond.com/the- works-of-john-diamond-md.

69. Mollon P. Psychoanalytic Energy Psychotherapy. Karnac Books Ltd.: London; 2008.

70. Callahan R. Thought Field Therapy, 2018. http://www. tftfoundation.org/research-on-thought-field-therapy/ research.

71. Craig G. The EFT Manual, 2nd Ed. Energy Psychology Press: Santa Rosa, CA; 2012.

72. Gallo F, Vincenzi H. Energy Tapping: How to Rapidly Eliminate Anxiety, Depression, C ravings, and More Using Energy Psychology, 2nd Ed. New Harbinger Publications: Oakland; 2008.