



The AAO

FORUM FOR OSTEOPATHIC THOUGHT

JOURNAL

Official Publication of the American Academy of Osteopathy®

TRADITION SHAPES THE FUTURE

VOLUME 19 NUMBER 1 MARCH 2009

The Orthotics In Reducing Self-Reported Chronic Musculoskeletal Pain Scores

Page 15...

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FORUM FOR OSTEOPATHIC

THE AAO
JOURNAL
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TRADITION SHAPES THE FUTURE · VOLUME 19 NUMBER 1 · MARCH 2009

The mission of the American Academy of Osteopathy® is to teach, advocate, and research the science, art and philosophy of osteopathic medicine, emphasizing the integration of osteopathic principles, practices and manipulative treatment in patient care.

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Contributors

James A. Lipton, DO, FAAO, et. Al.

The Use Of Heel Lifts and Custom Orthotics In Reducing Self-Reported Chronic Musculoskeletal Pain Scores

Musculoskeletal pain may result from postural asymmetry, which in turn can result from gait dysfunction and an unlevel sacral base. This retrospective review presents a statistical analysis of data collected from one hundred and twenty-three individuals who were treated by using temporary heel lifts which were subsequently incorporated into custom orthotics in order to correct gait, level the sacral base, and attempt to reestablish postural symmetry. These individuals reported statistically significant partial or complete reductions in their self-reported pain scores post-treatment.

William J. Cox, D.O., et. Al.

The Integration of Undergraduate Osteopathic Manipulative Medicine Fellows into Medical Education: The KCUMB-COM Model

Undergraduate osteopathic manipulative medicine (OMM) fellowship programs are now present in at least 15 of the 28 osteopathic medical schools. The Undergraduate OMM Fellowship at Kansas City University of Medicine & Biosciences is a one-year intensive study in the field of NMM/OMM. The focus of the fellowship is patient care, teaching, research and other scholarly activities. These OMM Fellowships offer osteopathic medical institutions a unique opportunity for augmentation of teaching and development of future osteopathic physicians with particular acumen and skills in OMT.

Makasha Colonvega, OMS-III, et. Al.

A case report of Osteopathic Manipulative Treatment in a 14 year-old girl with McCune-Albright Syndrome.

These authors describe the use of osteopathic care including OMT in a patient with this interesting syndrome. The case illustrates the role of osteopathic thinking and practical applications even in the face of genetically adverse conditions.

Regular Features:

Dig On. "Pass it On": A Tribute to Dr. William Kuchera, DO, FAAO. This article pays homage to one of the greats in the osteopathic profession. Anyone who knows "Dr. Dad", as he was so affectionately known, knows of his kind nature, his hard work, and his many contributions to osteopathy. Read this and enjoy!

From the Archives. This issue features a reprint of Chapter II from F. P. Millard's book, *Through the Fog*, in which he discusses some of the characteristics that constitute good teachers and good teaching. Dr. Millard, probably best known among DOs for his writings on the lymphatic system, also wrote several books of essays on topics that ranged from osteopathy to many other issues of his time.

Book Review. William H. Stager, DO, MS, FAAMA, FAAO, FACOPF, tells us in his review that osteopathic physicians interested in osteopathic manipulative treatment (OMT) will enjoy and appreciate this latest book from Zachary Comeaux, DO, FAAO: *Harmonic Healing: A Guide to Facilitated Oscillatory Release and Other Rhythmic Myofascial Techniques*. Readers of this book will not only get insight to these particular technique modalities, but will also get a glimpse of the thinking processes of Drs. Robert Fulford and William Sutherland, who thought in similar ways. Readers will also learn more about the late scientist and philosopher, Walter Russel, who was a big influence on Dr. Fulford.

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View From the Pyramids

Osteopathic Stories: A Source of Insight

Raymond J. Hruby, DO, MS, FAAO

It's not profound to say that we live in an evidence-based medical environment. We want data to support what we do for our patients. I firmly believe that much has been done to accomplish this with respect to osteopathic manipulation, and that the future will bring even more scientific support to our distinctive methods. At the same time I also have always loved what I call "osteopathic stories: anecdotes, if you will that also demonstrate the value of the art and practice of osteopathic medicine. Recently I came across a story that I had never heard of or read about before now. It is recorded in a book entitled *Osteopathic Principles and Practice*, by the late Thomas F. Schooley, DO, FAAO. Anyone who knew Tom Schooley also knew that he was a great and fine man who contributed much to the profession over his long and distinguished career. His book was self-published and I presume is now long out of print. The following story, however, is especially worth sharing because it illustrates once again the amazing genius expressed in the thinking of A. T. Still and also in that of William G. Sutherland, DO. As we know, Dr. Still liked to teach concepts and critical thinking to his students rather than rote mechanical information and techniques. Dr. Sutherland was a student of A. T. Still, and certainly demonstrated his ability to take the knowledge that Still offered and expand it to even higher levels. Imagine if you were a student sitting in Still's classroom. How would you have reacted to the lesson taught in the following story from Schooley's book (pp. 206 – 208)?

"Dr. Sutherland has told the story of how Dr. Still would come clomping down the corridor in old north hall, stomping his walking staff which was recognized by everyone. The professor at the podium would pause and look expectantly at the door for Dr. Still to enter, which he frequently did. Dr. Still would go directly to the podium, nod to the professor and the students and commence lecturing.

On this particular occasion he announced that he was going to tell the story of the goat and the boulder. It seems that there was a goat high up on a mountain, he was trotting down the narrow pathway and came upon a large boulder blocking the way. He lowered his head and butted the boulder but it did not move. He then went back up the path for a short distance and came running down to butt the boulder again. When he hit the boulder his tail flopped up but the boulder did not move. Again, he went back up the trail a little farther and then came charging down the path and butted the boulder and his tail and hind legs flopped up. Once more he went back to the top of the mountain and came full tilt down the path and butted the boulder with all his might. His tail and hind legs flopped up and he turned head over heels but the boulder did not move.

Without a word of explanation Dr. Still stomped out of the

room. Everyone knew that somewhere in this story was lesson in Osteopathic Principle.

Dr. Sutherland, who was in the classroom at that time, was just as confused as anyone. It was several days later that Dr. Sutherland met Dr. Still in the corridor and came right out and asked him the meaning of the story.

Dr. Still chuckled and said, "The goat is the heart and the boulder is the crura of the diaphragm and the goats tail and hind legs represent the aortic and mitral valves". With that Dr. Still continued on his way.

Dr. Sutherland immediately recognized the implications of the crura being too tense and causing a partial blockage of the flow of blood down the aorta.

When the heart contracts and forces the blood down the aorta until it reaches the diaphragm, and the crura which are too tense, there occurs a rebound wave of the blood which is carried back to the valves of the heart. If this condition persists long enough it will cause a prolapse of the valves of the heart.

Dr. Sutherland reasoned that the crura of the diaphragm must be stretched to prevent these happenings. With his vast knowledge of anatomy he remembered the small triangular space between the external oblique and the latissimus dorsi muscles and the crest of the ilium. He knew that by placing his thumb in this space he could contact the crura by having the patient lean sideways while he directed his thumb upward toward the crura.

By having the patient lean over the physicians thumb, bringing the crura down, it could then be held firmly until there is a relaxation of the crura. Dr. Sutherland called this method of patient cooperation "having the patient put his glove on your hand."

The aortic opening in the diaphragm is just to the left of the midline at the level of the 12th thoracic vertebrae. The crura, forming the boundaries of this opening, are fibrous bands that blend with the anterior longitudinal ligament and extend down to the third lumbar vertebra on the right side and down to the second lumbar on the left.

It is this area at the level of these lumbar vertebrae that contact is made for the stretching of the crura. Treatment should be applied to both sides."

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This course, developed by Dennis J. Dowling, DO, FAAO, is a system of diagnosis and treatment in which the osteopathic practitioner locates two related points and sequentially applies inhibitory pressure along a series of related points.

More information on the PINS course can be found on page 10.

AAO Convocation March 25-29, 2009 28.5 CME*

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The annual Convocation is devoted to advancing osteopathic medicine through innovative presentations and hands-on workshops guaranteed to enhance your personal and professional skills. This year's annual Convocation will re-discover the role of science as a key to balancing physiological function through the use of osteopathic manipulative treatment. Topics will explore relevant physiological function of the somatosensory, psychoneuroimmunology, neuroendocrine, neuroimmunology, reproductive, growth and development, and neuromusculoskeletal systems. The annual Convocation is designed for doctors of osteopathy in private or group practice and academics, students, interns, and residents.

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BASIC MECHANISMS OF OSTEOPATHY:
BALANCING THE NEUROENDOCRINE
IMMUNE SYSTEM

Lisa A. DeStefano, DO, Program Chair



Dig On:



Dr. Dad

“Pass it On”: A Tribute to Dr. William Kuchera, DO, FAAO

Jeanne Heyser-Easterly

Another American Academy of Osteopathy Convocation has come to an end. We are “home” this time, back in Colorado Springs. The atmosphere is thick with the spirit of osteopathy, both old and new. As is always the case, the wisdom of the elders blending with the excitement and curiosity of the fledglings creates the heady presence in the atmosphere of knowledge, learning, and sharing, which is so typical of the osteopathic profession. Passions for our profession run high here and the essence of osteopathy crackles in the thin air. But for me something, rather, someone, is missing. Someone is here but absent at the same time. That person is Dr. Dad, otherwise known as Dr. William Kuchera. For those of us who know him and/or who have had the privilege of learning from him, his wisdom and osteopathic spirit is sorely missed from our meetings. This article is written to let him know that he is not forgotten and to let him know that we keep him close through his words, writings, and through his son Dr. Michael Kuchera.

I knew of Dr. William Kuchera long before I ever had the privilege of meeting him; his technical knowledge and understanding was legendary. Indeed, Dr. William Kuchera’s skills as an osteopathic physician and his abilities as a teacher were known far and wide throughout the profession. Dr. Dad frequently taught with his son, Dr. Mike Kuchera, and as a teaching team they were unbeatable. In the mid 1990s I had my first chance to meet both Dr. Dad and Dr. Mike and learn first hand what a formidable team they made. Little did I know, at that time, what an impact Dr. Dad would have on my life.

It was May and notices for licensure renewal were out. Mine arrived and I was surprised to find that I did not have the hours needed for renewal – this had to be a mistake! It wasn’t. Somehow I had failed to attain enough hours and now had exactly one month to get them! I frantically called the AAO and was informed that a course, Osteopathic Medicine in Systemic Dysfunction, was being offered at the Kansas City College of Osteopathic Medicine by Dr. William Kuchera and Dr. Michael Kuchera. The course still had room and I immediately enrolled. Money was tight at that time and I really could not afford to go to this meeting, but more so I could not afford *not* to go: the classic Catch 22. In addition, I was also dreading the walk through the airport as I was experiencing long-standing, incapacitating plantar fasciitis in my left foot and mild plantar fasciitis in my right foot, the severity of which had been making me consider the use of crutches. This trip, besides being expensive, was also going to be painful. Failure to attain adequate hours for re-licensure was a BIG mistake on my part, one I have never made again. It also turned out to be one of the best mistakes of my life.

Osteopathic manipulation in systemic disease was not a course that I was particularly interested in, and in my ignorance,

I did not truly think of osteopathic medicine affecting systemic functions all that much; I mainly thought of use of osteopathic manipulation for relief of pain due to somatic dysfunction. But, I had heard nothing but good reviews about the courses taught by the Doctor’s Kuchera so I decided to attend this course instead of a family practice course. I arrived in Kansas City for “just another meeting” and left having had a life changing experience. The course was intensive and opened up an entire new way of thinking regarding how osteopathic medicine and manipulation affect the systems of the body. This new way of thinking would become critical to the career path I chose in the future. Dr. William and Dr. Mike covered volumes of material and patiently answered our questions as we tried to assimilate this knowledge into our thought patterns. It was hard and exhausting; it was invaluable.

As is usual in this type of course, many manipulative techniques were taught and extra help was always available. Individual participant musculoskeletal issues were also addressed as often as possible, with lunch being “prime time” for small group and individual demonstrations by Dr. Dad and Dr. Mike. It was during one of these lunch sessions that I had a chance to speak with Dr. William Kuchera about my plantar fasciitis and, being the caring person he was known to be, he offered to try to help. And help he did. Dr. Dad’s skillful treatment of my feet and ankles resulted in almost instantaneous relief in the right foot and, almost complete resolution of a 2-plus year problem in the left foot within two months. By July 4th, one month after treatment, I was so much improved that I was able to attend the fire-works with my children for the first time in over two years with only minimal pain. Not for the first time and certainly not the last, I had my life back once again because of the skillful application of the principles of osteopathic medicine.

Soon after the meeting I sent Dr. Dad a pair of glass doves as a heartfelt “Thank You.” I spoke to him shortly afterwards, telling him of the success of his treatment, how much I appreciated his willingness to help me Osteopathically, and how much it had changed my life. His response to me was, “*You’re an Osteopath; Pass It On.*”

Several months passed and I thought more and more about what I had learned from Dr. Dad and Dr. Mike during the course I had attended. This information, my own personal experience, and Dr. Dad’s directive (“Pass it on”) encouraged me to begin attending more AAO courses so that I could expand my knowledge of the uses and effects of osteopathic medicine and manipulation. This expansion of knowledge and skills began to prepare me for what was to come. Not long afterwards, I was approached by our local osteopathic college about being an Osteopathic Manipulative Medicine (OMM) table trainer for the first year students. I accepted the position with reluctance, due

to my own uncertainty regarding my ability to teach OMM. I ignored my personal fears because I heard Dr. Dad's directive, "Pass it on," and never regretted the decision. I taught OMM skills to the first and second year students for approximately seven years. Recently, I was honored to be asked by the AAO to both lecture and teach labs to the Undergraduate American Academy of Osteopathy students attending the national specialty group Convocation meeting. I would never have done so without the encouragement of Dr. Dad's words. His words have been my guiding light and my strength whenever I present osteopathic medicine to students or am asked to help a colleague with the application of osteopathic principles.

The knowledge imparted by Dr. Dad and Dr. Mike regarding the systemic applications and effects of Osteopathic Medicine and Manipulation have been with me ever since and have been the bases upon which I have built my hospital OMM practice. I am certain that I would not be where I am to today without that *final push* from Dr. Dad that reminded me *who I am, what I am, and what I so strongly believe in.*

Dr. Dad, your presence in the teaching arena is sorely missed. But we will carry on the torch of osteopathy proudly for you and with you. We are Osteopaths and without fail, we will "Pass it on."

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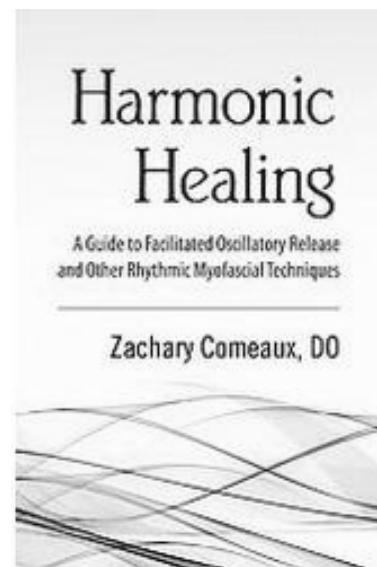
Book Review: Harmonic Healing

William H. Stager

Osteopathic physicians interested in Osteopathic Manipulative Treatment (OMT) will enjoy and appreciate this latest book from Zachary Comeaux, DO, FAAO: *Harmonic Healing: A Guide to Facilitated Oscillatory Release and Other Rhythmic Myofascial Techniques*. In this small and easily readable book, Dr. Comeaux combines his studies and passion for exploring the deeper aspects of Osteopathy with his years of experiences with some of Osteopathy's great physicians, including Drs. Fulford, Becker, Chila, Stiles, etc. He has particularly built on the perspective of form and function, anatomy and physiology, and somatic dysfunction and treatment from a rhythmic or vibratory point of view. He provides the reader with an historical and philosophical background review, taking us through the last 150 years, from the founder of Osteopathy, A. T. Still, MD, DO, to the present scientific basis of a vibrational concept.

Dr. Comeaux's study of Dr. Fulford and his healing techniques and ideas admirably "translate" Dr. Fulford's (and others') sometimes esoteric concepts into a modern scientific language. This latest book may even be considered a continuation or expansion of his book *Robert Fulford, DO, and the Philosopher Physician*. I appreciate this, as I also spent much time with Dr. Fulford; and as he was demonstrating something to a group, he (and the group) would often ask me to explain to them what he was doing and why. Dr. Fulford and Dr. Sutherland both spent some time with the late Walter Russel, a truly gifted scientist, philosopher, and artist, and Dr. Comeaux ties in some of Dr. Russel's key concepts of "rhythmic balanced interchange" with the theme of this book. Another quote that I keep on my desk from Dr. Russel, "In the wave lies the secret of the universe" comes to mind here, and Dr. Fulford and I spent a lot of time discussing the works of Dr. Russel, as I had studied them over many year with one of Dr. Russel's finest students, David Diamond. The interested reader is encouraged to study these spiritually profound, scientific books.

Dr. Comeaux brings in the thoughts and treatment concepts from many Osteopathic physicians as well as other practitioners, giving the book a broader appeal to therapists of many traditions. If somatic dysfunctions can be seen as vibrational dysfunctions, then the manual detection of vibratory dysfunction and the proper, gentle application of rhythmic, vibratory forces provide a profound method of diagnosing and treating on many levels. Dr. Comeaux rounds out the book with his own contribution of Facilitated Oscillatory Release, and leads the reader, with photographs, through the steps of diagnosis and treatment. These diagnostic and therapeutic treatment methods can be integrated into any treatment session, style, or profession, giving them value to any physician or therapist who practices hands-on modalities. I highly recommend this book to practitioners of all kinds who care to advance and enhance the science and art of hands-on healing and manual medicine.



Harmonic Healing
by Zachary Comeaux, DO, FAAO
176, pp, \$22.95
Berkeley CA,
North Atlantic Press/Random House
ISBN-978-1-55643-694-9

Submitted by William H. Stager, DO, FAAO

The Integration of Undergraduate Osteopathic Manipulative Medicine Fellows into Medical Education: The KCUMB-COM Model

William J. Cox, Lori A. Boyajian-O’Neill, Michael D. Roach, Jessica A. Ridgley

INTRODUCTION

Undergraduate osteopathic manipulative medicine (OMM) fellowship programs have evolved over the past several decades and are now present in 15 of the 28 osteopathic medical schools (1, 2, map 1). Fellowships are unique to their respective colleges of osteopathic medicine in the specific duties and responsibilities of fellows. The number of fellows & the specifics of how their year of fellowship is divided may differ, but all provide educational and service opportunities designed to expand and share knowledge in the art and science of OMM. Kansas City University of Medicine and Biosciences-College of Osteopathic Medicine (KCUMB-COM) Undergraduate OMM Fellowship, was established in 1992. This manuscript describes the Undergraduate OMM Fellowship at KCUMB-COM and the role of the fellowship in osteopathic medical education.

All KCUMB fellows are members of the National Undergraduate Fellows Association (NUFA), an organization sponsored by the American Academy of Osteopathy (AAO). Created in 1993, NUFA assists in communications between undergraduate OMM fellows through monthly online meetings, and meets formally at the AAO Annual Convocation. Under the guidance of AAO, NUFA provides workshops, classes, and mentoring opportunities for fellows at the AAO Annual Convocation.

NUFA supports opportunities for students to learn and practice OMM skills through workshops and classes (3).

Prior to 2005, those who had completed a one year undergraduate OMM fellowship could apply for credit to satisfy some of the criteria to sit for the Special Proficiency in Osteopathic Manipulative Medicine (C-SPOMM) examination. At that time, certification was obtained through clinical pathway. Today, undergraduate OMM fellowships do not satisfy any criteria for board eligibility. Currently, neuromusculoskeletal medicine/osteopathic manipulative medicine (NMM/OMM) board certification is attained only through residency training in an AOA-approved graduate medical education program. Students who apply for a fellowship do so to enhance their own understanding of OMM.

The KCUMB Undergraduate OMM Fellowship is a one year intensive study in the field of NMM/OMM. The fellowship is directed by a faculty advisor with engagement of all members of the Department of Family Medicine. Fellows participate in all aspects of academic medicine including teaching, patient care, service, research and scholarly writing.

All 2nd year osteopathic medical students from any college of osteopathic medicine are eligible for the fellowship at KCUMB-COM through a formal application process. Often, applicants

Table 1

Benefits of the KCUMB Undergraduate OMM Fellowship	Value
Tuition paid for 4 th and 5 th year of school (KCUMB students only)	\$74,000
Stipend to assist in living expenses during the year of fellowship	\$16,276
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PROGRESSIVE INHIBITION OF NEUROMUSCULOSKELETAL STRUCTURES (PINS)

March 25, 2009

COURSE OUTLINE

This level I course, developed by Dennis J. Dowling, DO, FAAO, is a system of diagnosis and treatment in which the osteopathic practitioner locates two related points and sequentially applies inhibitory pressure along a series of related points.

Progressive inhibition of neuromuscular structures (PINS) is a technique that can be included in the osteopathic manipulative treatment repertoire. It relies on knowledge of anatomy and neuromuscular physiologic features as well as on standard forms of osteopathic palpatory diagnosis and treatment. It is a variant of the inhibition technique that has been taught as an osteopathic manipulative technique for many years, and it bears some resemblance to other manual medicine techniques. The emphasis of the approach is the determination of the alteration of the tissues due to dysfunction, delivering treatment based on palpatory evaluation and patient feedback. Two related points are initially chosen, followed by a progression from one to the other. Relationships to similar techniques are also discussed. Theoretical as well as selected practical applications are presented.

Pre-Requisite: Basic understanding of functional anatomy

COURSE TIME TABLE

Wednesday, March 25, 2009 12:00 pm-6:00 pm

The program anticipates being approved for 6 hours of AOA Category 1-A CME credit pending approval by the AOA CCME.

ABOUT THE FACULTY

Dennis J. Dowling, DO, FAAO

Dr. Dowling is a 1989 graduate of the New York College of Osteopathic Medicine. He is the former chairman of OMM at NYCOM and a past president of the AAO. He is in private practice in OMT specialty in Syosset, New York and is the Director of Manipulation in the Department of Physical Medicine and Rehabilitation at the Nassau University Medical Center on Long Island, New York. Dr. Dowling is also Director of OMM Assessment for the NBOME. In addition to co-editing *An Osteopathic Approach to Diagnosis and Treatment*, Dr. Dowling is a contributor and illustrator for other textbooks and journals. He was presented the Thomas L. Northup Memorial Lecture Award in 2005, the Scott Memorial Lecturer Award in 2004 and the David Heilig, DO, FAAO Award in 2001. Dr. Dowling currently is the Vice Chair of the American Osteopathic Board of Neuromusculoskeletal Medicine

REGISTRATION INFORMATION

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AAO Members: \$ 190

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On or after 2/10/09

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Non Members: \$ 580

COURSE LOCATION

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3 Statehouse Plaza
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<http://www.peabodylittlerock.com/>

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have been OMM teaching assistants at their respective institutions. A selection committee comprised of faculty of the Department of Family Medicine meets to interview and select applicants. Candidates must be in good academic standing at their institution and are selected based on multiple factors such as interest and aptitude in OMM, and character. Selection is made before the student matriculates to their 3rd year of medical school. Fellows typically assume duties at the beginning of the 4th academic year in July after successful completion of year 3 clinical clerkships. This ensures that the fellows have one year of experience in patient-care prior to entering the fellowship. Upon completion of the one year fellowship at KCUMB-COM, they re-enter the clinical clerkship schedule to complete the doctor of osteopathic medicine degree program at their home COM. Thus, the traditional four-year degree program is extended to five years to include this fellowship year.

Fellows are considered to be temporary employees of KCUMB and receive a stipend and a scholarship. Tuition is waived for year 4 and year 5, if the fellows are students at KCUMB-COM. During the fellowship year, fellows are considered to be full-time students in good standing in order to maintain their eligibility for student education loans. Other benefits include fees and travel for the American Academy of Osteopathy Annual Convocation. A complete list of benefits is found in Table 1.

The fellowship program is based on an academic practice model with focus on patient care (knowledge application); teaching (knowledge sharing); research/scholarly activity (knowledge acquisition) and University and community service. Chart 1 delineates time devoted to program activities.

The KCUMB Student Health Clinic (SHC), located on the KCUMB campus, is focused on the treatment of students with acute medical conditions and neuromusculoskeletal complaints. Students with neuromusculoskeletal complaints are directed to the “OMM Clinic” of the SHC where they are evaluated and treated by fellows under the direct supervision of a faculty physician of the Department of Family Medicine. Fellows provide comprehensive neuromusculoskeletal evaluations and osteopathic manipulative treatment. Problem oriented medical records are created in a manner consistent with standard of care. These ‘hands-on’ experiences provide OMM fellows opportunities to develop and improve skills in the osteopathic approach to diagnosis and treatment. Additionally, students who present as patients to the OMM Clinic are exposed to the clinical applica-

tions of osteopathic principles and practices and manipulative techniques.

In order for fellows to maintain and develop general patient care skills, they are assigned to primary care clinics three ½ days per week for each month of the entire fellowship. For seven months, fellows are assigned to an OMM clinic and provide neuromusculoskeletal assessments and OMT. The remaining months of OMM clinical fellowship rotations include family medicine, internal medicine, pediatrics, physical medicine and rehabilitation, and sports medicine. All preceptors for these rotations are clinical faculty members of KCUMB-COM and teach OMM. Fellows are assigned to these clinical fellowship rotations to learn better how to integrate OMM into a typical community clinical setting.

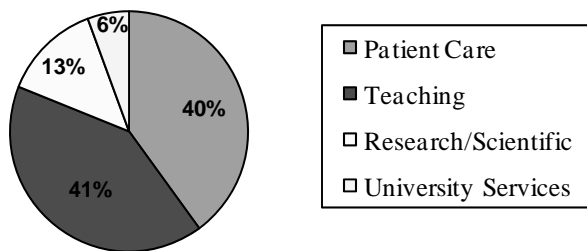
Fellows are required to participate in at least one clinical research project focused on osteopathic manipulation. They develop and refine basic research skills and project management. These include: project design, literature review, implementation, data analysis and scientific writing. Fellows are expected to submit their research to scientific journals for peer review and for presentation at the American Academy of Osteopathy (AAO) Annual Convocation and the Annual KCUMB Research Symposium. Fellows are encouraged to compete through the Undergraduate American Academy of Osteopathy for an opportunity to present a case during the AAO Convocation annual A. Hollis Wolf case presentation competition. Fellows also collaborate with university faculty on various publications & manuscripts.

Fellows serve as instructors for Integrated Osteopathic Clinical Skills (IOCS). This course features instruction in osteopathic principles and practices (OPP), OMM, physical examination, and patient communication skills. The IOCS laboratory at KCUMB is a 6,500 square foot facility with 68 OMM TABLES, eighteen 42” plasma screens, a wall projector, and a stage. There is a central media room which houses all of the audiovisual equipment. Fellows assist in providing one-on-one teaching of students at OMT tables. Clinical laboratory sessions convene one day per week for four 2-hour sessions. During IOCS, fellows also coordinate in-lab activities of the OMS II teaching assistants.

Along with teaching responsibilities, fellows manage the IOCS media room. Fellows receive formal instruction from members of the KCUMB Information Technology Department regarding media room operations. During the IOCS laboratory sessions, fellows operate the computer and three cameras, projecting images from the stage to the plasma screens for student viewing and for recording of the sessions. These recordings are available in the library for check-out to students for asynchronous learning.

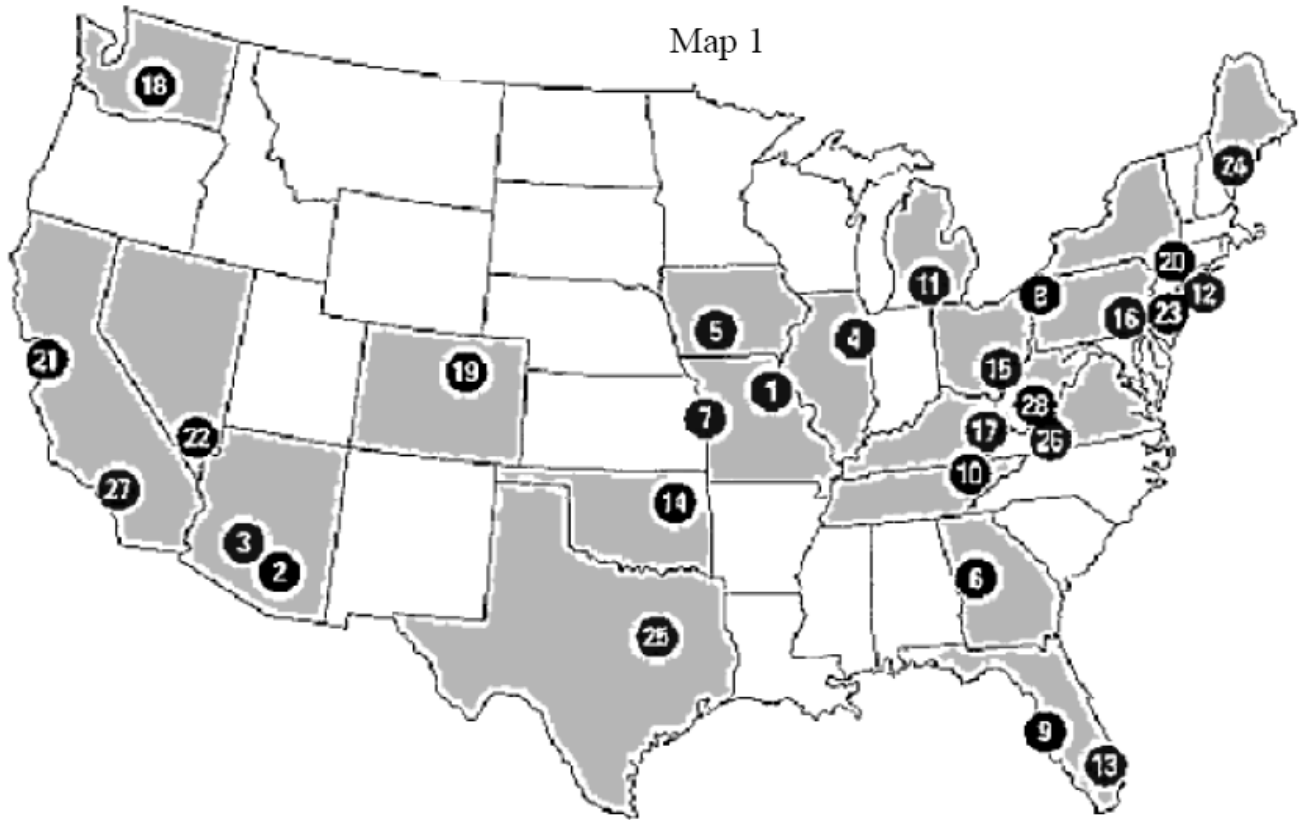
Fellows serve as formal tutors for students through KCUMB Learning Enhancement Center. Tutors receive a \$12 hourly wage for this program which is available and free to all KCUMB students. This affords an opportunity for the development of teaching skills and also provides additional revenue. This is another “learn through teaching” opportunity for the fellows.

Chart 1. Program Activities Based on Time



Continued on page 13

Map 1



- | | |
|--|---|
| <ul style="list-style-type: none"> 1. A.T. Still University Kirksville College of Osteopathic Medicine 2. A.T. Still University School of Osteopathic Medicine in Arizona 3. Arizona College of Osteopathic Medicine of Midwestern University 4. Chicago College of Osteopathic Medicine of Midwestern University 5. Des Moines University College of Osteopathic Medicine 6. Georgia Campus Philadelphia College of Osteopathic Medicine 7. Kansas City University of Medicine and Biosciences College of Osteopathic Medicine 8. Lake Erie College of Osteopathic Medicine 9. Lake Erie College of Osteopathic Medicine Bradenton Campus 10. Lincoln Memorial University DeBusk College of Osteopathic Medicine 11. Michigan State University College of Osteopathic Medicine 12. New York College of Osteopathic Medicine Of The New York Institute of Technology 13. Nova Southeastern University College of Osteopathic Medicine 14. Oklahoma State University Center for Health Sciences College of Osteopathic Medicine | <ul style="list-style-type: none"> 15. Ohio University College of Osteopathic Medicine 16. Philadelphia College of Osteopathic Medicine 17. Pikeville College School of Osteopathic Medicine 18. Pacific Northwest University of Health Sciences College of Osteopathic Medicine 19. Rocky Vista University College of Osteopathic Medicine 20. Touro College of Osteopathic Medicine - New York 21. Touro University - California Touro University College of Osteopathic Medicine 22. Touro University - Nevada Touro University College of Osteopathic Medicine 23. University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine 24. University of New England College of Osteopathic Medicine 25. University of North Texas Health Science Center at Fort Worth Texas College of Osteopathic Medicine 26. Edward Via Virginia College of Osteopathic Medicine 27. Western University of Health Sciences College of Osteopathic Medicine of the Pacific 28. West Virginia School of Osteopathic Medicine |
|--|---|

● Osteopathic institutions with undergraduate fellowship programs (4,5)

Presently, KCUMB students have six IOCS practical examinations each of the first two years. Fellows conduct one or two formal IOCS clinical review sessions, generally 1 ½ to 6 hours in duration, to assist students preparing for the examinations. These review sessions allow students to practice techniques under structured guidance. Fellow reviews are held approximately 24 times per year (after every 2 lab sessions), after hours or weekends, and are optional for students. These reviews allow the fellows to address concerns of the students and act as a liaison, relaying information between students and faculty.

Fellows are required to attend the American Academy of Osteopathy (AAO) Annual Convocation and strongly encouraged to attend other conferences such as the American Osteopathic Association Annual Convention, the National Conference of Family Medicine Residents and Students, the American Osteopathic Academy of Sports Medicine Annual Clinical Conference, and the American College of Osteopathic Family Physicians Annual Convention. Fellows also accompany faculty members within the Department of Family Medicine to various regional/national continuing medical education presentations to assist and train table-side. These interactions provide opportunities for networking with other students, fellows and osteopathic physicians.

SUMMARY

OMM Fellowships offer Colleges of Osteopathic Medicine a unique opportunity for augmentation of teaching and development of future osteopathic physicians with particular acumen and skills in OMT. The varied experiences of the fellows position them for greater success in clinical clerkships, expanded opportunities for graduate medical education, and advanced skills for future clinical practice.

REFERENCES

1. Cross, Brianna. National Undergraduate Fellowship Association Liaison 2007-2008. nufalialison@academyofosteopathy.org.
2. American Association of Colleges of Osteopathic Medicine. <http://data.aacom.org/colleges/>
3. American Academy of Osteopathy. <http://www.academyofosteopathy.org/nufa.cfm>.
4. American Association of Colleges of Osteopathic Medicine, <http://www.aacom.org/people/colleges/Pages/schoolmap.aspx>
5. American Association of Colleges of Osteopathic Medicine, <http://www.aacom.org/people/councils/Pages/ECOP.aspx>

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May 1-3, 2009

COURSE OUTLINE

This is a didactic and hands-on laboratory course designed for the practicing clinician, educator or health professional students, who use, plan to use, or would like to better understand, the evidence-based manual medicine approach to patients with common musculoskeletal problems.

The goals and objectives are:

- Access the scientific literature in support of a manual approach to common clinical problems.
- Apply knowledge of epidemiology, functional anatomy, biomechanics, pathophysiology and differential diagnoses, as supported by basic science and clinical research studies and expert panel recommendations, to guide a manual medicine approach to patients with 3 common clinical problems: low back pain, neck pain, and cervicogenic headache.
- Perform reliable and valid osteopathic diagnostic and manual treatment procedures specifically applicable to these patient populations.
- Learn the indications and contraindications for manual treatment for each clinical condition.

COURSE TIME TABLE

Friday, May 1, 2009 8:00 am—6:00 pm
Saturday, May 2, 2009 8:00 am—6:00 pm

The program anticipates being approved 20 hours of AOA Category 1-A CME credit pending approval by the AOA CCME.

ABOUT THE FACULTY

Michael A. Seffinger, DO: Dr. Seffinger is a 1988 graduate of MSUCOM. He is board certified in Family Medicine and Neuromusculoskeletal and Osteopathic Manipulative Medicine and received a certificate of competency from the Cranial Academy. He is a tenured associate professor at the College of Osteopathic Medicine of the Pacific, Western University of Health Sciences in Pomona, CA. Since 1995 he has taught evidence-based osteopathic manipulative medicine hands-on seminars at the American Academy of Family Physicians annual scientific assembly which led to the publication of the book *Evidence-Based Manual Medicine: A Problem Oriented Approach* in 2007.

Ray J. Hrubby, DO, FAAO: Dr. Hrubby graduated from the College of Osteopathic Medicine and Surgery in Des Moines, Iowa in 1973. From 1985 to 1990, Dr. Hrubby was in private practice in San Diego, California. In 1990, he became an Associate Professor in the Department of Osteopathic Principles and Practice at the University of New England College of Osteopathic Medicine in Biddeford, Maine. In 1995, he became the Chair of the Department of Osteopathic Manipulative Medicine at the Michigan State University College of Osteopathic Medicine. In 1999, he accepted the position of Chair of the Department of Osteopathic Manipulative Medicine at Western University College of Osteopathic Medicine of the Pacific in Pomona, California. Dr. Hrubby is certified in Osteopathic Manipulative Medicine and in Osteopathic Family Practice and is a Fellow of the American Academy of Osteopathy. He has taught osteopathic principles and techniques internationally for many years. He co-authored *Manual Medicine: An Evidence Based Approach*.

REGISTRATION INFORMATION

Before 4/1/09

AAO Members: \$ 560
Non Members: \$ 800
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On or after 4/1/09

AAO Members: \$ 660
Non Members: \$ 900
Intern, Student, & Residents: \$560

On-site Registration

AAO Members: \$ 710
Non Members: \$ 950
Intern, Student, & Residents: \$610

COURSE LOCATION

Western University of Health Sciences
College of Osteopathic Medicine of the Pacific
309 E. Second St.
Pomona, CA 91766-1854
<http://www.westernu.edu/xp/edu/comp/about.xml>

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The Use Of Heel Lifts and Custom Orthotics In Reducing Self-Reported Chronic Musculoskeletal Pain Scores

Lipton, James A., Flowers-Johnson, Jonah, Bunnell, Melissa T. and Carter, Letitia

ABSTRACT

Musculoskeletal pain can be due to postural asymmetry, which can result from gait dysfunction and an unlevelled sacral base. This study is a retrospective review and statistical analysis of data collected from one hundred and twenty-three individuals who were treated by using temporary heel lifts which were subsequently incorporated into custom orthotics in order to correct gait, level the sacral base, and move toward postural symmetry. These individuals reported statistically significant partial or complete reductions in their self-reported pain scores post-treatment.

KEY WORDS

Orthotics, heel lifts, sacral base unleveling, leg length inequality, low back pain

INTRODUCTION

Low back pain (LBP), as an example of musculoskeletal pain, affects up to eighty percent of people at some period in their life.¹ Consequently, LBP is responsible for a large loss of productivity and is the second leading cause of missed work days.¹ Unfortunately, back pain can have a multifactorial etiology, and providing a specific diagnosis can be a complicated endeavor.² LBP of a mechanical or musculoskeletal nature accounts for the majority of complaints.³ An early reference to leg length inequality (LLI) was proposed in 1863 by Hilton.⁴ Since that time there have been a number of studies implicating LLI in the mechanism of action related to musculoskeletal complaints. Known etiologies of LLI include infection, trauma, tumor, fractures, poliomyelitis, congenital defect, joint surgery, juvenile rheumatoid arthritis, and foot pronation.⁵ Gait dysfunction, LLI, and sacral base unleveling are linked as well.^{5,6,7,8}

Our patients had a variety of chronic musculoskeletal complaints including low back pain, mid back pain, neck pain, hip pain, knee pain, and combinations thereof making the focus on one complaint possibly too focused. Among the ideas behind the hypothesis studied was that gait mechanics and sacral base unleveling are often untreated causes or exacerbating factors of multiple chronic musculoskeletal complaints, including predisposition to acute episodes. Even acute traumatic herniated disks may be herniating at the weakest point developed over time from postural dysfunction. For example, patients with LLI are at greater risk of developing disabling spinal disorders due to exaggerated degenerative change.⁹ LLI is a contributing factor in a myriad of conditions, including low back pain, knee pain, and abnormal gait.¹⁰ The hypothesis was that by leveling the sacral base and correcting gait dysfunction we could decrease the patients' self-reported pain scores for outpatient

ambulatory non-surgical orthopedic diagnoses confirmed to be safe for this treatment. There are studies that touch on aspects of this approach.^{11,12,13}

METHOD

We knew at the outset that to safely treat musculoskeletal complaints with an osteopathic physical medicine approach we would need to rule out emergent, non-musculoskeletal or surgical conditions according to the standard of care common to allopathic and osteopathic practices.¹⁴ In order to address red flags and avoid missed diagnoses, all patients filled out an exhaustive history form, received comprehensive interviews, and were given thorough physical exams to establish diagnoses appropriate for care. An individually planned history, physical, imaging series, and where appropriate, laboratory studies, helped screen red flags and narrow the working and differential diagnoses to treatable specific diagnoses. The actual diagnoses, such as mild right knee osteoarthritis or a bulging disc at L4-5, were secondary to the fact that no surgical emergency existed. It was important to discern that there was not, for example, a large previously undiagnosed ovarian tumor that was at the root cause of a viscerosomatic reflex referring pain to the low back and would take precedence over conservative somatic treatment.

The physical examination used for our patients complaining of musculoskeletal pain included palpation of sacral base unleveling and assessment of LLI. This entailed comparing four points bilaterally: the medial malleoli, anterior superior iliac spines, inferior lateral angles, and the sacral sulci. Gait was visually analyzed to search for obvious medial lateral gait dysfunction such as hyperpronation or changes such as pes planus. Searching for postural problems to correct was a goal because "postural strain/sprain is among the most frequent of functional demand conditions that create persistent pain from musculoskeletal sources."¹⁵

The authors are well aware that sacral base unleveling can also be measured by radiography. Irvin demonstrated that the results of sacral base leveling measured through radiography are reproducible.¹⁶ The authors have reported that through clinical experience, a thorough musculoskeletal exam can detect significant LLI. The physical exam is adequate in order to estimate the amount of lift needed to level the sacral base and address the patients' complaints.¹⁷ In this study, the presence of sacral base unleveling, and not the specific LLI measurement, was of primary concern. The purpose of a heel lift is to level the sacral base. Through a physical exam, the sacral base is palpable to the point of determining if it is very unlevel or apparently level. Proper diagnosis of sacral mechanics via palpation is a skill taught as a matter of routine in osteopathic medical education.¹⁸

We have found that we do not need to radiograph patients pre or post-treatment in order to measure the degree of sacral base unleveling or to determine LLI. The line of reasoning is that pre-

treatment palpation and subsequent radiography can determine a sacral base as unlevelled. Subsequent leveling of the sacral base with a shoe lift has been verified as reproducible radiographically.^{17,19} Therefore, in an asymptomatic patient it is even less necessary to radiographically document a degree of sacral base unleveling that is clinically managed and palpably less than in its pre-treatment state. The need for radiographic documentation of landmarks satisfactorily identified by palpation diminishes in the face of clinical success. In other words, if the sacral base has leveled to palpation and the patient is pain free, that is an excellent reproducible outcome without the need for radiographic landmarking. However, all patients received imaging, which included x-rays and MRI, to confirm the overall safety of their diagnoses prior to treatment. We have also found, prior to this study, that placing a shoe lift in the contralateral side to where it ought to be placed is its own control. Patients do not tolerate this and will voice their objections in very short order. Rancont described a scenario in which the inappropriate placement of a heel lift resulted in intractable pain of the hip and groin.¹⁰ Also noted is the role of muscle imbalance rather than osseous shortening in producing LLI rendering radiographic osseous measurements clinically unnecessary for the determination of the cause of leg length inequality and the achievement of a beneficial lift or orthotic prescription. The authors feel that lift treatment is indicated for sacral base unleveling which may often be secondary to muscle imbalance. An unlevelled sacral base decreases the ability of the spinal column to balance the forces of gravity, which can be associated with gait dysfunction. Gait dysfunction can create a muscle imbalance over time or conversely be the result of a muscle imbalance, which in turn can accentuate or create an LLI.²⁰ Shell and Irvin report that, "Other than ideal configuration of the feet and attitude of the sacrum necessarily destabilizes the musculoskeletal system to a subtle but unrelenting extent."²¹ Kuchera believes that "otherwise effective pain management strategies aimed at peripheral pain generators often initially fail outright, or the pain generators will recur after these strategies if the presence of excessive functional demand, postural imbalance, or other perpetuating factors are not considered."¹⁵

After diagnosis, the patients were started on a temporary heel lift treatment applied to the side of the physiologically short extremity. Lift treatment usually involves inserting a durable lift in the corresponding shoe of the "short leg." At the end of a fourteen day trial period, if the sacrum is level and the lift tolerated, then the lift will be replaced by custom prescribed orthotics. The orthotics address remaining gait dysfunction along with incorporating the lift into the prescription. Some patients were treated with spinal manipulation, in addition to their lift treatment, after they were given ample time to adjust to the lift. Improvements in pain scores should be recorded well before manipulation enters the treatment plan so as not to confound results. Manipulation remains an important staple in an osteopathic physician's skill set. The addition of OMT to a therapeutic regime gives an additional option to the patients regarding their care with a low risk-to-benefit ratio.²² This treatment assists the realignment process literally above and beyond the ability of the lift to level the sacral base.

Proponents of osteopathic medicine have supported the association between LLI, sacral base unleveling, and potential

LBP.²⁰ Osteopathic literature emphasizes the potential need for appropriate manipulative treatment to assist the patient in the process of accommodation to the lift.¹⁷ Previous authors have looked at the efficaciousness of heel lifts in patients²³ as well as specifically monitoring sacral base leveling and its contribution to the reduction of pain.²⁴

A retrospective review and statistical analysis of data from patients was conducted. The analysis compared patients' stated worst pain before treatment and follow-up pain after wearing temporary lifts and progressing to treatment with orthotics. One hundred and twenty-three patients were studied in a private outpatient physical medicine practice, which was roughly one-third of all patients seen during the time period of the study. Those excluded from the study included any patients who were not prescribed orthotics, two patients having deployed to Iraq on the same day with no follow-up, and patients not being in any initial pain. Initially, one hundred and forty-eight charts were studied for inclusion in the study. Some of the data was excluded due to the patients' failure to follow-up, declining orthotics after improvement on a temporary lift for financial reasons, or intolerance to a temporary heel lift due to secondary gain with third party litigation pending.

Many patients had used treatments of medications, physical therapy, modalities, injections, and surgery without lasting relief prior to presenting. All patients were not satisfied with their level of pre-treatment pain and were seeking additional care. During their initial visit, patients were asked to rate their worst pain using a visual analog numeric pain scale from zero to ten. Zero indicated a complete lack of pain while ten indicated the worst pain possible. At each follow-up visit, a subsequent pain rating was recorded in their medical record in order to track their pain scores.

After eliciting a detailed history, a thorough physical exam was completed including the assessment of physiologic leg length and sacral mechanics. Prior to the examination, the subject was instructed to empty all pants pockets since objects, such as a wallet, can produce factitious anterior superior iliac spine movement. The exams were performed with the patients in the standing, walking, supine and prone positions. Supine leg length assessment alone is reported to be 74% sensitive, 78% specific, and 82% predictive in cases of recurrent LBP.²⁵ The bilateral medial malleoli, bilateral ASIS, inferior lateral sacral angles, and the left and right sacral sulci were used to assess physiologic LLI and sacral mechanics.

Imaging studies were obtained to rule out surgical or occult disease. This meant for example, that a patient complaining of low back pain who had a possible dissecting aortic aneurysm, metastatic cancer, uterine fibroids, ovarian cysts or kidney stones was not mistaken for a patient with non-viscero-somatic ambulatory non-surgical musculoskeletal complaints.

Patients were prescribed either a six or nine millimeter lift, as appropriate to level the sacral base, to be worn in the shoe of the assessed short leg. Usually patients with minimal LLI or those over the age of fifty-nine were given six millimeter lifts. Younger patients with more pronounced LLI generally tolerated nine millimeter lifts. They were instructed to wear this lift at all times with the exception of sleeping and bathing. Sometimes LLI was not readily apparent due to ASIS inequality

making limbs appear equal at the medial malleoli. Hips were then de-rotated using an osteopathic muscle energy technique. This method leveled the ASIS thus revealing the short leg side in order to correctly place the heel lift.²⁰ This maneuver eliminated the error often found in patients presenting with heel lifts placed on the incorrect side by those measuring with tape measures from the iliac crest to the medial malleolus. All patients that agreed to lift and orthotic treatment were provided with patient education, both verbal and written concerning adjustments that might occur in the body (mainly feet, knees, and hips) as it adjusted to the placement of the heel lift.²⁰

When the patient tolerated the heel lift for two weeks and the sacral base became leveled, patients were fitted with customized orthotics for gait correction. The purpose of waiting two weeks was to screen for the patient whose muscle imbalance resolved with lift treatment on the fourteenth day. These patients, though rare, have been seen in the authors' clinical experience. They become completely level and no longer require orthotic correction. They identify themselves by having done well the first thirteen days and on the fourteenth day have increased pain. No such patients were seen in this study. The temporary lift was replaced with an orthotic custom prescribed for that patient that always included a permanent unilateral lift and features such as medial or lateral wedges, arch supports, and heel cups depending on the presence or absence of pronation, supination, or heel spurs.

Years of experimenting with orthotic types have led to the authors' use of non-compressible gel temporary heel lifts. Equally important was the orthotic fabrication of soft durable material uppers, wedges, and cushions covering a non-compressible fibrous lift equally distributed in the heel. The use of polypropylene orthotics or heel wedges is not recommended.

RESULTS/DATA ANALYSIS

Of the 123 patients that were included in the final data analysis, the average age was 50.9 years. The oldest patient was 88 years of age and the youngest was 19. Five cases were eliminated because one had no pain at start or finish and was 12 years old; the other four were under age 18 and still growing at a rapid rate. The average initial pain was 8.00 and average follow-up pain was 1.46. The average percentage of improvement of pain was 82.0%. Patients' duration of follow-up ranged from 14 to 340 days. The average duration of follow-up was 107.7 days.

The median pain score on the VAS at the initial visit was 8.0 and the median pain score on the VAS at follow-up was 0.0. This was statistically significant at $p \leq .000$ by the Wilcoxon Matched Pairs test. See table 3.

Of those patients whose pain was mild at the initial visit, 100% reported mild to no pain at the follow-up visit. Among those patients with moderate pain at the initial visit, 88.2% reported none to mild pain at follow-up, 11.8% reported moderate pain at follow-up, and none reported severe pain at follow-up. Of those patients whose pain was severe at the initial visit, 75.3% reported none to mild pain at follow-up, 22.2% reported moderate pain at follow-up, and 2.5% reported severe pain at follow-up. This was statistically relevant at $p \leq .000$ by the Chi

-square test as values where p is less than 0.05 were considered significant. See table 4.

Table 1: Respondent Characteristics

Characteristic	
Gender	
% Female	65.3
% Male	34.7
Age in Years	
Mean (sd)	51.90 (14.24)
Mode (IQR)	51.50 (42-61)
Range	19-88
Duration of Care in Days	
Mean # of Days (sd)	107.7 (69.49)
Median # of Days (IQR)	93.00 (58-134)
Range	14-340

Table 2: Pain Level At Initial Visit and Followup

	Initial	Follow-up
Pain Level		
% None-Mild (0-3)	2.5%	79.7%
% Moderate (4-7)	28.8%	18.6%
% Severe (8-10)	68.6%	1.7%

Table 3: Median Pain Scores at Initial Visit and Follow-up

	Initial	Follow-up	Significance
Pain Scores			
Median pain (IQR)	8.00 (7.0, 9.25)	0 (0, 2.25)	.000 ^a

^aAs tested by the Wilcoxon Matched-Pairs test

Table 4: Relationship of Pain at Initial Visit to Pain at Follow-up

	% with follow-up pain that was:			
Initial pain was:	None-Mild	Moderate	Severe	Significance
None-Mild (0-3)	100%	0.0%	0.0%	.000 ^a
Moderate (4-7)	88.2%	11.8%	0.0%	
Severe (8-10)	75.3%	22.2%	2.5%	

^aAs tested by the Chi-Square test

May 15-17, 2009

COURSE OUTLINE

After participating in this level III course, participants will:

- Understand the history of the Still Technique, its loss and recovery.
- Identify the underlying method of the Still technique.
- Learn segmented diagnostic techniques that are shared by this technique with HVLA and muscle energy technique as well as those unique to the Still technique.
- Learn specific applications of the technique to the cervical, thoracic, and lumbar spine, ribs, pelvis, extremities, muscles, and tendons.

COURSE TIME TABLE

Friday, May 15, 2009 8:00 am—5:30 pm
Saturday, May 16, 2009 8:00 am—5:30 pm
Sunday, May 17, 2009 8:00 am—12:30 pm

The program anticipates being approved for 20 hours of AOA Category 1-A CME credit pending approval by the AOA CCME.

ABOUT THE FACULTY

Richard L. Van Buskirk, DO, PhD, FAAO

Dr. Van Buskirk is a 1987 graduate of the West Virginia School of Osteopathic Medicine. He received his PhD from Duke University in Neuroscience in 1976 and taught and conducted basic science research for a number of years before matriculating at WVSOM. After graduating from WVSOM, he completed an osteopathic family practice residency. He has been in private practice and in 1997 was accorded the honor of becoming a Fellow in the AAO. He is published frequently, including *JAOA* articles on "Nociception and the somatic dysfunction" in 1990 and more recently an article describing a rediscovered manipulative technique of Dr. Andrew Taylor Still. Dr. Van Buskirk was a section-editor and author for the Osteopathic textbook project, *Foundations for Osteopathic Medicine*. He has published a book, *The Still Technique Manual* and has taught courses in the U.S. and internationally.

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DISCUSSION

The hypothesis of this study was that patients would report a significant reduction of musculoskeletal pain scores beyond the placebo effect after the objective leveling of the sacral base by the appropriate use of a temporary heel lift and subsequent use of orthotics to correct gait mechanics. The authors believe the one-third placebo effect noted by Turner et al. to widely occur in such studies did not apply to the same degree in this study.²⁶ A placebo effect would have no correlation to sacral base leveling for which the patient would be unable to self-assess. The reported reduction in subjective LBP was always correlated with the objective examination findings of a sacral base leveled by the heel lift and a gait corrected through the use of custom prescribed orthotics. Also, a noncompliant patient trying to fake improvement would be identified immediately through detection of an unlevelled sacral base. Patients included in this study would not have been reluctant to seize the opportunity to declare no improvement. They had all tried numerous treatment options in the past. They maintained their complaints of persistent pain without reservation to both prior and current examiners. For example, a drug seeker would not hesitate to continue to complain of pain. Additionally, someone seeking to simply placate the examiners while not being compliant²⁷ or via the placebo effect, attempt to placate themselves consciously or unconsciously, would have to do so by leveling their own sacral base and normalizing their gait with or without the use of the orthotic. This was something all patients failed to do prior to treatment. Additionally, patients reported that this treatment plan reduced their pain, which was also objectively concordant with postural changes they could not reliably alter or monitor on themselves.

The authors acknowledge that lift therapy is simple, inexpensive, non invasive, and poses negligible risks to the patient.²⁰ The crucial factor for the placement of a lift is whether or not the sacral base is level rather than the presence of LLI. The objective of custom prescribed orthotics is to correct gait while simultaneously incorporating lift treatment to level the sacral base. The success of this study is attributed to the power of combining the treatments. The authors have seen many molded orthotic prescriptions which are symmetrical. These treatments fall short by providing symmetrical correction to asymmetric patients with an unlevelled sacral base. A source of error may be failing to account for sacroiliac joint asymmetry.⁸ This study was limited by the small number of patients. Another limitation of the study was its reliance on subjective parameters. The pain level, the relative value of which varies from patient to patient, serves instead as a generally accepted guide. Another weakness is purposely not dissecting out for statistical consumption the various diagnoses helped by lift treatment beyond noting a general descriptor of chronic pain though this can include aspects of acute episodes of pain that are non-emergent. Our data suggests that the reduction of pain scores is correlated with the results of leveling the sacral base and correcting gait. Unaffected or worsening pain scores would have created more concern regarding untreated diagnoses. The overall improvement is beneficial enough and the risk benefit ratio so favorable, that the specific diagnosis for the statistical purposes of this short term study is a distinction without a difference. For example, there is evidence that orthotic treatment has favorable results in treating osteoarthritis of the knee.^{28,29} The authors feel that data

for every diagnosis involved in musculoskeletal pain may be of additional academic value, but for the purpose of this study it can be sufficient to note that individuals with various types of common chronic musculoskeletal pain were treated. Patients had their pain relieved, in their opinion, by objectively addressing sacral base unleveling and gait dysfunction that they may or may not have originally been aware. The notion that the underlying role of gait dysfunction being a deeper cause of variety of musculoskeletal pain is supported by recent studies, particularly with respect to osteoarthritis of the knee³⁰, iliotibial band syndrome, and low back pain.³¹

One serendipitous finding was with a patient who had a repeat magnetic resonance imaged (MRI) herniated disk including the L4-5 level. The patient had already been successfully treated with orthotics and was pain free, but months later, developed low back pain from overuse while moving furniture. The patient was sent for imaging to make sure she had not developed more severe findings at the involved or other levels of the lumbar spine. The MRI showed the L4-5 herniation had resolved to a normal position only after the variable of orthotic treatment had been employed. What turned out to be just acute muscle spasm resolved in short order, and she returned to her post-orthotic treatment state. We are not recommending the post treatment MRI of asymptomatic patients. Similarly, we report the resolution of her L4-5 herniation not to warrant the result as reproducible, but rather to note that the notion of resolving abnormal disc morphology with orthotic treatment may be worthy of further study when economically and ethically feasible.

CONCLUSION

The data indicates that the patients with chronic musculoskeletal pain perceived relief when their gait was corrected with custom diagnosed orthotics which also included a permanent unilateral heel lift to level the sacral base. This treatment is a simple, cost-effective, and non-invasive method that results in the objective correction of somatic dysfunction and patient perceived reduction of pain scores for nonsurgical ambulatory outpatient musculoskeletal complaints.

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CME QUIZ

The purpose of the quiz found on page 30 is to provide a convenient means of self-assessment for your reading of the scientific content in the “The Use Of Heel Lifts and Custom Orthotics In Reducing Self-Reported Chronic Musculoskeletal Pain Scores” by Lipton, et. Al.

Answer each of the questions listed. The correct answers will be published in the June 2009 issue of *The AAOJ*.

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A Case History of Recent Problem Breathing and Special OMT for the Heart

Isabelle A. Chapello

Having read the article on Heart Failure by W. W. Wilson Tang, MD, of the Cleveland Clinic, in the July 2007 issue of the *Consultant Medical Journal*, his comment about stiffness of the cardiac chambers or valvular abnormalities being manifestations of heart failure caught my attention. As the fluid movement in the body becomes impaired, a stalemate in the chest is compensated for by stretch, shifting of related body parts or fluid force.

While treating a supine patient with Osteopathic Manipulation some years ago, I discovered rigidity, asymmetry, tissue texture changes and tenderness of parts of the anterior rib cage and I wondered about the effect on the heart and lungs within. I then devised away to first treat the lower level of the rib cage, anterior and posterior, right and left sides simultaneously, with a trained helper under my direction, on the opposite side of the patient. This treatment of the lower, mid, and upper levels of the rib cage - for a minute and a half at each level - has become part of my total body structural evaluation and treatment.

When I learned that a friend of mine was being discharged from a four-day hospital stay with a plan for an intracardiac device (ICD) and open-heart surgery, I felt the need to help this friend with Osteopathic Manipulation Treatment (OMT) for the heart. So, armed with my portable treatment table and, a load of goodwill, I began OMT at her home. Twice a week in the beginning, then once a week for two weeks, then once every two weeks according to the progress of her condition. She was instructed to take 10 deep breaths before each meal, and walk 10 to 15 minutes, 3 to 5 times a week. Further testing of her progress and medication instructions were continued by her medical doctor. She will require a prophylactic ICD (pacemaker or defibrillator) if the ejection fraction is less than 35%. If her mitral regurgitation is still severe, her physician may also consider open-heart surgery with prophylactic ICD.

The body may pay an unbearable price for a lack of adequate exercise, exposure to the daily use of hair spray and a nutritionally deficient diet - also, the heart fails adequate motion while attempting to function from within a rigid cage. To illustrate this, close your right fist and cover it securely with your left hand; you are unable to straighten the fingers of your right hand while the left hand grips it. That is what happens to the

heart in the rigid cage of the thoracic spine, rib cage and sternum when years of an improper diet, lack of exercise and other environmental factors have led to dysfunction of these structures.

THE SHIFTING PARADIGM OF HEART FAILURE TREATMENT

Heart failure has been defined as the "inability of the heart to meet the body's metabolic and physiologic everyday needs" (Tang, 2007, p. 730). Many cases of heart failure follow common events such as myocardial infarction or chemotherapy. Most develop from reversible comorbidities such as a precedent viral syndrome, coronary artery disease and myocardial ischemia, poorly controlled hypertension, valve disorders, rhythm abnormalities, thyroid problems and excessive alcohol intake.

Myocardial remodeling addresses the molecular basis of heart failure such as hypertrophy of the cardiac myocytes, dilation and interstitial changes of the cardiac chambers, adrenergic receptors and alterations in calcium. Strategies for prevention of heart failure in turn prevent ventricular remodeling. Guidelines for the prevention of heart failure are provided in Figure 1. The B-type natriuretic peptide (BNP), a 32 amino acid peptide secreted from the ventricular walls in response to stretch or damage, BNP and its counter-part, amino-terminal pro BNP Q.{T pro BNP) are used to rule out heart failure in patients who present with acute dyspnea.

Tang (2007) states, "The focus of heart failure management has shifted from salvage of the decompensated state to early recognition of at-risk patients and prevention of disease progression" (p. 730). Any dilation or stiffness of cardiac chambers or valvular abnormalities can manifest heart failure. The clinical congestion shows up as peripheral edema, pulmonary rales, and jugular venous distention. At least half of patients with heart failure do not have impaired left ventricular ejection fraction (LVEF). Diastolic heart failure is under recognized in the elderly. Without overt functional limitations, an abnormal pump function may be considered an incidental finding along with abnormal ventricular relaxation on a cardiac imaging stress test.

I hypothesize that stiffness of the cardiac chambers can also manifest, at least in part, from structural dysfunction of the tho-

Figure 1. Heart Failure Prevention Guidelines	
a. Tight control of blood pressure, blood glucose and lipids.	b. Weight reduction, aim for body mass index (BMI) of less than 30 kg/m ² .
c. Physical activity (20 to 30 minutes of aerobic activity) 3-5 times per week.	d. Smoking cessation
e. Limit alcohol intake (1-2 drinks a week).	f. Limit sodium intake, 2 to 3 grams sodium per day.
Angiotensin converting-enzyme inhibitors are recommended for all patients at high risk for heart failure and B-blockers are recommended for prior myocardial infarction.	

racic spine, rib cage and sternum - in effect, placing the heart in a rigid cage as described previously. This case history reports on a self-devised OMT for the heart and the subsequent progressive improvement of the individual's condition.

THE CASE

A female (age 57) was taken to a hospital emergency room in a large Mid-western city with difficulty breathing, worsening fatigue and decreased exercise capacity when feeling tired and nocturnal dyspnea for two weeks - recent treatment with Zyrtec was not helpful.¹

She was admitted with a diagnosis of Congestive Heart Failure. She presented with a non-productive cough, significant orthopnea and exertional dyspnea. She denied fever, shaking chills and pain or swelling of the extremities. She described bloating and fullness in her abdomen and post-nasal drainage. Patient noted skipped heartbeat, palpitation and no chest pain.

Past Medical History

Person History	Family History
Hypertension	Negative for lung disease
Hyper lipidemia	Negative for heart disease
Diabetes	Negative for kidney disease
Obesity	

Vital Signs (take 11-8-05)

Temperature 36.2 °C (97.1 °F)	Basic metabolic profile - not clinically significant
Pulse - 108 (N72)	CPK 67 (N 12-70 U/ml or 55-170 U/L)
Respiration - 26 (N 15-20)	Troponin .02 (N<0.06 nanograms/ml)
Blood Pressure 159/82 (N 120/80)	Pulse Oximetry 97% (N > 90%)
Chest X-Ray - revealed pulmonary edema, cardiomegaly	BNP 655 (N < 100 pictograms/ml)

Review of Symptoms

Cardiac	Patient noticed skipped heartbeat, but no chest pain, denied leg edema and pain.
Respiration	Exertional dyspnea, postnasal drainage, orthopnea, recent normal thyroid profile. Admitted nonproductive cough, no hemoptysis.
Gastrointestinal	Negative.
Constitutional	Negative.
Integument	Negative.
Neurologic	Negative.
Psychiatric	Negative.
Genitourinary	Negative.

Medications

Atacand ½ tablet/day = 32 mg/day	Glyburid ½ tab/day = 5mg/day
Metformin 500 mg - 2 BID	

Social History

Negative for tobacco or alcohol, married and lives near a Mid-western city.

Allergies

None.

Emergency Room Treatment

Aerosol, 40 mg Lasix, Aspirin

Physical Examination (conducted 11-8-05)

Cardiac. Severe Dyspnea with minimal activity, last few days had to sleep almost sitting in a chair, awakening a few times at night gasping for breath; without precordial heave, dyskinetic PMI in 5th intercostals space, left midclavicular line, irregularity noted - possibly systolic ejection murmur, soft and possibly even an S3 gallop, P2 not loud. Rhythm is sinus, frequent premature ventricular complexes.

Head. Atraumatic, normocephalic, pupils equal and react to light. Nares patent, postnasal drainage, no goiter, exophthalmos or proptosis. No jugular venous distention, no bruit, trachea is midline, no lymphadenopathy.

Lungs. Clear to auscultation, resonant to percussion, no wheezes, rales or rhonchi.

Abdomen. Softly distended, soft to palpation, active bowel sounds, no ascites.

Laboratory. Hb 13.1 (N 12 to 16), Glucose 152, BNP 655, electrolytes, BUN and creatinine - within normal limits.

12-lead EKG (conducted 11-8-05)

- Shows sinus rhythm, rate of 95 BPM
- PR interval is 169 milliseconds
- QPS is 96 milliseconds
- QT 3 of 7, QTC 0.413
- Nonspecific ST-T wave abnormality with occasional unifocal PVC's. Intravenous diuresis upon admission gave significant improvement of symptoms.

2D Echocardiogram (conducted 2 weeks prior to admission)

- Showed significant cardiomyopathy, ejection fraction in 15% range.
- Severe mitral regurgitation, with a mostly central mitral jet.
- Normal prolapse of both leaflets.
- Left atrium was moderate to severely enlarged, without thrombus.
- Systolic flow reversal in upper pulmonary veins, consistent with severe degree of mitral regurgitation.
- Aortic valve with trace insufficiency, no vegetation.
- Tricuspid valve showed degree of regurgitation with a pulmonary pressure estimated at 44 mmHg.

Several days of monitoring showed: frequent PVC's, peri-

ods of bigeminy, asymptomatic; no non sustained ventricular tachycardia, no lightheaded spells, syncope or presyncopal sensation. Good resolution of her dyspnea. It would be reasonable to pursue a 2D echocardiogram in approximately one month to check for any improvement in ventricular function and lessening of mitral regurgitation. She will require a prophylactic ICD if ejection fraction is <35%. The patient refused an ICD. If her mitral regurgitation still is severe, consider open-heart surgery followed by prophylactic ICD.

Dipyridamole/Persantene Stress (Test)

Intravenous injection of 47 mg of Persantine produced chest pressure relieved by nasal oxygen at 3 L. Frequent trigeminy and bigeminy. Inability to achieve gating and arrhythmia prevented wall motion analysis. Myoview injection into infusion, appropriate symptoms developed. Heart rate increased from 87 BPM to 102 BPM, blood pressure decreased from 126/79 to 110/154 mm Hg. The baseline EKG showed ventricular bigeminy without abnormalities suggestive of myocardial ischemia. Although frequent PVC's continued, no sustained arrhythmia developed.

Adult Echocardiogram

- a. The left ventricle is moderately dilated.
- b. Left ventricular systolic function is severely reduced.
- c. Ejection fraction: less than 25%.
- d. Severe diastolic dysfunction of ventricle.
- e. The right ventricular systolic function is moderately reduced.
- f. The left atrium is mildly dilated.
- g. There is severe valve prolapse.
- h. There is severe mitral regurgitation.
- i. There is moderate tricuspid regurgitation.
- j. Pulmonary hypertension is moderate.

Transesophageal Echocardiography

- a. Severe left ventricular systolic dysfunction.
- b. Severe left ventricular diastolic dysfunction.
- c. Moderately severe mitral regurgitation probably due to left ventricular dysfunction.
- d. Mild to moderate pulmonary hypertension.
- e. Trace aortic insufficiency.

Cardiac Catheterization

Indication: congestive heart failure, Mitral regurgitation.

- a. Left heart - LVEDF 24 mmHg No aortic gradient, LV gram-global hypokinesis, LV is severely dilated, Ejection fraction 15% Mitral regurgitation +3.
- b. Coronary angiogram - L main, free of disease. LAD - disease free. Circumflex is disease free, Right coronary artery, small with luminal irregularities less than 30%.

Summary: No coronary artery disease. Severe LV systolic dysfunction. Moderately severe degree of mitral regurgitation.

Thoracic Spine Testing and Treating

Treat thoracic spine prior to the rib cage treatment. On the back of the seated patient, check the thoracic vertebral area for prominence of transverse processes or tenderness, then motion test at that level.

Motion Test: With operator's fingers lightly applied to right and left transverse processes of the same vertebr4 the patient gently bends head forward (flexion), then to neutral and lastly backward (extension), while the operator checks for greater backward motion on one side and notes the causal side, and whether in flexion or extension.

ERS_R (a vertebra that is extended, rotated and side bent to the right) treatment:

If operator's fingers move backward on the right side, with the head forward bent, that vertebra is lesioned in extension and will not flex. Treat with flexion, side bending to left and rotating to left. The level of motion is determined by the motion-sensing finger - located at the transverse process of the lesioned vertebra. The operator's other hand on the patient's head stops head at the motion sensing point. Then patient bends head with about 1 pound pressure toward their right shoulder and releases. Repeat sequence 3 times to sequentially return vertebra to normal position; then, in flexion derotate and side-bend head to the right and return to midline.

FRS_R (a vertebra that is flexed, rotated, and side bent to the right) treatment:

With backward bending of the head the transverse process of one vertebra shows more backward movement on the right, that vertebra is lesioned in flexion and does not extend, treat in extension. Patient's head extended to lesioned vertebra monitored by motion sensing finger, side bent to left and rotated left; patient nod forehead toward left knee with about 1 pound pressure and release. Repeat sequence 3 times, then de-rotate and side-bend to the right in extension and return to midline.

Rib Cage Testing and Treating

With operator's right hand on supine patient's left rib cage, and left hand on patient's right rib cage - check bilaterally for rigidity, muscle spasm, asymmetry or tenderness and note Right or Left as the problem side. With a trained helper on opposite side of the patient, treat lower rib cage first: right and left, anterior and posterior simultaneously. On lesser problem side, operator places caudad palm under lower ribs - fingers in line with lines of ribs - fingertips at transverse processes and removes hand when helper places their caudad hand under it. Operator's other hand is placed anteriorly at lower ribs, fingertips on tender points or asymmetries, to show location to helper and operator removes hand. Operator on problem side does likewise, for the same minute and a half contact.

Move to mid rib cage level on non problem side. Use cephalic palm under rib cage, thumb and index finger somewhat cup the inferior angle of the scapula posteriorly and the other hand placed anteriorly for contact at asymmetry or tenderness determined by operator at that level to show helper. Operator does likewise on problem side.

Next, treat upper rib cage. As patient raises head, operator locates tense connecting tissue of arm to thorax (C₇T₁) to show helper the place for helper's finger contact on non-problem side. With thenar eminence of other hand, operator locates contact for helper against rib2 and palm contact succeeding ribs. On problem side, operator locates arm connection with cephalic hand and palm of other hand over upper ribs. Fingers point cau-

During hospitalization/Pre OMT (Test Date - 11-9-05)	3 months after hospitalization/post OMT (Test Date - 2-24-06)	6 months after hospitalization/post OMT (Test Date - 6-5-06)
The left ventricle is moderately dilated.	The left ventricle is moderately dilated.	The left ventricle is moderately dilated.
Left ventricular systolic function is severely reduced.	Left ventricular systolic function is moderately reduced.	Left ventricular systolic function is moderately to severely reduced.
Ejection Fraction = < 25%	Ejection Fraction = 25-35%	Ejection Fraction = 45-50%
Severe diastolic dysfunction of LV.		
The right ventricular systolic function is moderately reduced.	The right ventricular systolic function is moderately reduced.	The right ventricular systolic function is normal.
The left atrium is mildly dilated.	The left atrium is mildly dilated.	Borderline left atrium enlargement; right atrial size is normal.
There is mild mitral valve prolapsed.	The mitral valve leaflets appear thickened, but open well.	The mitral valve leaflets appear thickened, but open well.
There is severe mitral regurgitation.	There is moderate mitral regurgitation.	There is mild to moderate mitral regurgitation.
Pulmonary hypertension is moderate.	Mitral valve prolapsed cannot be excluded.	Mitral valve prolapsed cannot be excluded.
	There is trace tricuspid regurgitation.	Valve is grossly normal.
	The aortic valve is trileaflet.	Trace aortic regurgitation.
	The transmitral spectral Doppler flow pattern is suggestive of abnormal relaxation.	The transmitral spectral Doppler flow pattern is suggestive of impaired LV relaxation.
		No pericardial effusion.

dad. Slight caudad pressure is applied by operator, until release of rib cage is felt.

Somatic Dysfunction diagnosed before and after hospitalization (November 8, 2005 to November 13, 2005) on June 4, 2005 (5 months before hospitalization), on November 14, 2005 (the day after discharge) and on November 23, 2005 (nine days later). Somatic Dysfunction represents impaired or altered function of related components of the body framework: skeletal, arthrodiastal and myofascial structures, and related vascular, lymphatic and neural elements. It is treatable using Osteopathic Manipulation that begins with total body evaluation in standing, sitting and lying positions, of 10 body areas: sacral, pelvic, lumbar, thoracic, cervical, abdominal, rib cage, upper extremities, lower extremities and the head.

The levels treated were:

- On June 4, 2005 (10 areas) L-2,T-12,6,4, Rib 1_R, Clavicle_R, the problem side of 3 levels of the rib cage was on the left, C-5_L, 4_R, LE_B, Ing lig_R, Psoas_R, ASIS_RP, BST_R, K_B, Coeliac Plexus, Sh_R, R2_R, UE_B, and Head.
- On November 14, 2005 (7 areas) LE_B, Ft_B, Pelvic diaphragm, Hypogastric Plexus, Coeliac Plexus, C-1_L, UE_B, the problem side of 3 levels of the rib cage was on the left, Head and Vagus Nerve.
- On November 23, 2005 (10 areas) L-2,T-7,6,4,2, C-5, LE_B, BST_R, ASIS_RP, Pelvic Diaphragm; the problem side of 3 levels

of the rib cage was on the left, abdominal reflexes - Hypogastric and Coeliac: UE_B, Head - Nasal Sinuses, Vagus Nerve

CONCLUSION

Based on the results of this case, it appears that OMT can play a beneficial role in the treatment of heart failure. Further studies are needed to confirm these results and delineate an optimal OMT protocol for treatment or prevention of heart failure.

REFERENCE

1. Tang, W H Wilson. (2007) Heart Failure: Part 1, Diagnosis and Staging. *Consultant*. 47(8) 729-733

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Letter to the Editor:

Richard L. Van Buskirk

Muscle Impulse, A Muscle Energy Variant

Walter C. Ehrenfeuchter

December 31, 2008

Letter to the Editor
American Academy of Osteopathy Journal
3500 DePauw Blvd
Suite 1080
Indianapolis, IN 46268

Re: Richard L. Van Buskirk - Muscle Impulse, A Muscle Energy Variant

I read with interest Dr. Van Buskirk's description of his impulse variant of Muscle Energy technique, and I applaud his making it known to the profession in a timely fashion.

In the interest of keeping the proliferation of named techniques to a minimum I submit the following:

- 1) Muscle Energy Technique is defined in the Glossary of Osteopathic Terminology¹ as "A system of diagnosis and treatment in which the patient voluntarily moves the body as specifically directed by the osteopathic practitioner. This directed patient action is from a precisely controlled position against a defined resistance by the osteopathic practitioner."
By this definition, Dr. Van Buskirk's technique is in fact a muscle energy technique.
- 2) In *Foundations for Osteopathic Medicine – 2nd Ed.*² one of the physiologic principles behind the successful application of muscle energy technique is the phenomenon of Post-Isometric Relaxation. "Mitchell Jr.³ postulated that immediately after an isometric muscle contraction, the neuromuscular apparatus is in a refractory state during which passive stretching may be performed without encountering strong myotatic reflex opposition....."

Common usage alone has dictated that the isometric contraction be maintained for 3 to 5 seconds, followed by one to two seconds of complete relaxation prior to repositioning. There is no data to support the superior efficacy of this duration of contraction over any other; again, it is common usage.

Dr. Van Buskirk's technique appears to use this same Post-Isometric Relaxation phenomenon. His methodology differs significantly from common usage.

It is my opinion that Dr. Van Buskirk's discovery is a post-isometric relaxation muscle energy technique. His method of applying the activating force is new, or perhaps a reinvention of T. J. Ruddy's rapid rhythmic resistive duction.⁴ Either way, if this new methodology works in enough for other dysfunctions, it will be a great help by significantly shortening the time required for the application of certain muscle energy techniques in the patient care setting. I look forward to testing the application of this technique in the clinical arena and hearing of the success or failure of others who try this new approach.

Sincerely,

Walter C. Ehrenfeuchter, DO, FAAO
Professor & Chairman – Dept of Osteopathic Manipulative Medicine
Georgia Campus – Philadelphia College of Osteopathic Medicine
625 Old Peachtree Road
Suwanee, GA 30024

References

1. *Glossary of Osteopathic Terminology* – April 2006 available through AACOM Web Site (www.aacom.org)
2. *Foundations for Osteopathic Medicine* – 2nd Ed. p 882-884, 2003 – Williams & Wilkins
3. Mitchell Jr FL, Moran PS, Pruzzo NA. *An Evaluation and Treatment Manual of Osteopathic Manipulative Procedure*. 2nd ed. Kansas City, MO: Institute for Continuing Education In Osteopathic Principles, Inc.; 1973:325.
4. Ruddy TJ. Osteopathic Rhythmic Resistive Duction Therapy. In: Barnes MW, editor. *Yearbook of the Academy of Applied Osteopathy*. Indianapolis, IN: American Academy of Osteopathy; 1961:58.

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From the Archives: Through the Fog

An excerpt from the book *Through the Fog*, by F. P. Millard, D.O., pp. 23 – 27. Published by the Journal Printing Company, Kirksville, MO, 1927.

Chapter II: Peering

*“He who is plenteously provided for from within,
needs but little from without.”*

Has a lecturer of dynamic personality ever aroused you from your apathy sufficiently to make you catch his vision? Undoubtedly, the most wonderful lecture ever given from a public platform was that by Russell Conwell of Philadelphia. He gave the one lecture many thousands of times and always he thrilled his audience. In Philadelphia today a memorial is being built through the foundation he established by the fortune he amassed, and many a young person will take advantage of this endowment to prepare himself for a great life's work. No one could possibly listen to that marvelous lecture without going away thrilled from head to foot. You could almost imagine that, in spite of yourself, you too might become famous.

One of our crying needs today is for more stimulating lectures, for this is not an oratorical age, no longer the day of the silver-tongued genius who, by word manipulation, could almost persuade us that black was white. Today there are no lyceum bureaus such as we had thirty or forty years ago when the best thinkers went throughout this broad land of ours and gave, in words both clear and strong, the knowledge they had gained by living and learning. Is it because men lack the ability or because information is given out with such lavish hand by our papers and periodicals? Truly, this is a magazine age, a period when the dailies are so numerous and voluminous that the face of the earth is being stripped of its pulpwood to meet the competition that Sunday editions encounter in every large city of our country. People are certainly better posted, and if they read intelligently and discriminatingly, may acquire a field of knowledge in ten years that our forefathers never did possess, so fully and attractively are even the most ponderous subjects put before us in our periodicals.

Some of our greatest men have developed from almost impossible students. When they entered the field of activity in actual business life they surprised everyone, perhaps even themselves, since it sometimes requires an unusual situation to plumb the depth of our capabilities. I say, self-made men should be given unbounded credit, for their visions and dreams were undoubtedly practical ones.

It might not be practical to have a dream school, but it certainly would add much to our knowledge to know young folk sufficiently well to have them relate some of their dreams and uncover their air castles to a sympathetic gaze. Upon this foundation, teachers could build a better cultural structure as well as a professional or commercial one.

There has been only one Michael Angelo. No other human brain has ever been able to conceive forms, outlines and tracings such as this notable man worked out with his brain and his hands. We may never have another Bard of Avon, but we shall always have his writings to remind us of the far distances glimpsed by one who could peer out and beyond. Every great musician has given to the world a little different phase of music, and the minds of some

of those masters must have been rare and beautiful. They lived in a dream world, peopled with haunting melodies in spirit form. They could peer through what seemed to others absolute darkness and mystery and seemed to see in the opening skies a beckoning light towards which they moved, and, all along the pathway to the light were serenades and strains of music. Their gift to the world was a glorious symphony that could spell only harmony in the minds of eager listeners.

Why do we refer to a certain great man as a genius? Upon investigation, we find that he can do at least one thing in a most remarkable manner that appears to the uninitiated almost phenomenal. His powers of peering through the obscurity of an unknown realm, an untried sea, an unexplored path, is almost beyond the comprehension of mere man. We owe much to these geniuses. They have been given to the world to make it a more pleasant place to live and to entertain dear souls who really desire to be uplifted. Most geniuses are psychics, products of the great university of thought. They are able to tap realms that the ordinary mind cannot even glimpse. Only in this way can we account for the gifts they bring us. The world has been benefited mostly by those who have been tutored by the unseen. Euclid gave to the world a series of books that were later burned, but that knowledge was never lost. Some other great soul will pick up the same trend of thought, will be tuned to the same vibration, and in a day to come we will have a genius still greater than Euclid.

Out of the starry heavens many people receive inspiration without any technical knowledge of the solar system that is still a puzzle even to astronomers whose gaze has long been heavenward. Marvelous telescopes have been invented and constructed on various points of the earth's surface and the searching eyes of the keenest students of all times have looked through these instruments and revealed to the world startling facts. We have been given "inside information" but even the best informed of these students have to admit they have touched but the fringe of things. Some day we'll understand, of that we have full assurance. We are peering today with little minds and clouded vision, but some day we will move up closer and catch the vision of God's great plan in producing the various heavenly bodies on which our little earth is dependent for light and heat. That much we know and comprehend, but it is sufficient to be our inspiration to peer still further.

To some great souls inspiration is food and drink. Let no one decry these souls—they may be more normal than we are, for the soul that is satisfied is not a normal soul. The moment we cease to long and wonder, we begin to decay. The more energy we have, the easier it should be for us to peer into the unknown. It should be infinite satisfaction to fathom some of the great plans that were really intended for us to understand. It would almost seem that there is a limit to the things we are supposed to know, but there are innumerable things that we can and may understand if we really desire to make the scheme of life much more comprehensible than it is at the present time.

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Name of Article: *Muscle Impulse, A Muscle Energy Variant*
Author(s): Richard L. Van Buskirk, DO, PhD, FAAO
Publication: *Journal of the American Academy of Osteopathy, Volume 18, No.4, September 2008, pp. 7-8*

Mail this page with your quiz answers to:
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December 2008 AAOJ
 CME quiz answers:
 1. D
 2. A
 3. C
 4. E
 5. B

Answer sheet to March 2009 AAOJ CME quiz will appear in the June 2009 issue.

- 1) Known etiologies of leg length inequality include:
 - a) infection
 - b) trauma
 - c) poliomyelitis
 - d) tumor
 - e) all of the above
- 2) Low back pain has been:
 - a) a minor factor in lost productivity
 - b) unrelated to actual sick days in the workplace
 - c) unrelated to tobacco abuse
 - d) estimated in the past to be the second leading cause of lost productivity in the workplace
 - e) none of the above
- 3) The use of orthotics:
 - a) has not been studied in conditions other than low back pain
 - b) has not been found to influence the symptoms produced by degenerative disease
 - c) is unrelated to the improvement of degenerative disease
 - d) may have a beneficial effect in patients with certain types of osteoarthritis of the knee
 - e) none of the above
- 4) The sacral base:
 - a) is uninvolved in low back pain
 - b) has been shown to be level regardless of muscle imbalance
 - c) degree of unleveling is calculated in most studies of low back pain published in the literature
 - d) when disregarded may be at the root of errors inherent in studies of low back pain
 - e) none of the above
- 5) Other than ideal configuration of the feet and attitude of the sacrum:
 - a) has no effect on the musculoskeletal system
 - b) has not been studied with regard to low back pain
 - c) creates stability in the vertebral column
 - d) contributes to the subtle destabilization of the musculoskeletal system
 - e) none of the above
- 6) The use of orthotics has:
 - a) never been studied in the military
 - b) has had no beneficial outcomes in patients under significant stress
 - c) is of use in patients proven to have pretreatment sacral base angles that are known to be level
 - d) beneficial outcomes documented in patients with low back pain
 - e) none of the above

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Original Contributions: Clinical or applied research, or basic science research related to clinical practice.

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Special Communications: Items related to the art of practice, such as poems, essays and stories.

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Comments on articles published in *The AAO Journal* or new information on clinical topics. Letters must be signed by the author(s). No letters will be published anonymously, or under pseudonyms or pen names.

Book Reviews

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Note

Contributions are accepted from members of the AOA, faculty members in osteopathic medical colleges, osteopathic residents and interns and students of osteopathic colleges. Contributions by others are accepted on an individual basis.

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We encourage and welcome a floppy, CDROM, or DVD containing the material submitted in hard copy form. Though we prefer receiving materials saved in rich text format on a CD-ROM or via Email, materials submitted in paper format are acceptable.

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Provide a 150-word abstract that summarizes the main points of the paper and its conclusions.

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