

The AAO

FORUM FOR OSTEOPATHIC THOUGHT

JOURNAL

Official Publication of the American Academy of Osteopathy

TRADITION SHAPES THE FUTURE

VOLUME 21 NUMBER 4 DECEMBER 2011

The Thomas L. Northup, DO, Memorial Lecture...

presented by Brian F. Degenhardt, DO



Photo courtesy of the American Osteopathic Association

Osteopathy's Legacy, Osteopathic Medicine's Challenge

The American Academy of Osteopathy is your voice . . .

... in teaching, advocating, and researching the science, art and philosophy of osteopathic medicine, emphasizing the integration of osteopathic principles, practices and manipulative treatment in patient care.

The AAO Membership Committee invites you to join the American Academy of Osteopathy as a 2011-2012 member. The AAO is your professional organization. It fosters the core principles that led you to choose to become a Doctor of Osteopathy.

For just \$5.01 a week (less than a large specialty coffee at your favorite coffee shop) or just 71 cents a day (less than a bottle of water), you can become a member of the specialty professional organization dedicated to the core principles of your profession!

Your membership dues provide you with:

- A national advocate for osteopathic manipulative medicine (including appropriate reimbursement for OMM services) with osteopathic and allopathic professionals, public policy makers, the media and the public.
- Referrals of patients through the Search for Physician tool on the AAO website, as well as calls to the AAO office.
- Discounts on quality educational programs provided by AAO at its Annual Convocation and workshops.
- New online courses now available.
- Networking opportunities with your peers.
- Discounts on publications in the AAO Bookstore.
- Free subscription to the AAO Journal published electronically four times annually.

- Free subscription to the new AAO online member newsletter.
- Access to the active members section of the AAO website which will be enhanced in the coming months to include many new features including resource links, job bank, and much more.
- Discounts in advertising in AAO publications, on the website, and at the AAO's Convocation.
- Access to the American Osteopathic Board of Neuromusculoskeletal Medicine—the only existing certifying board in manual medicine in the medical world today.
- Maintenance of an earned Fellowship program to recognize excellence in the practice of osteopathic manipulative medicine.
- Promotion of research on the efficacy of osteopathic medicine.
- Supporting the future of the profession through the Student American Academy of Osteopathy on college campuses.
- Your professional dues are deductible as a business expense.

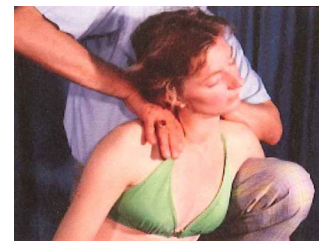
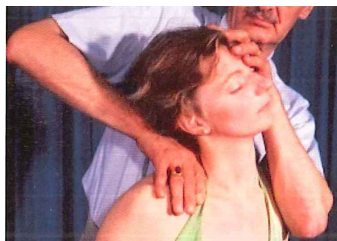
If you have any questions regarding membership or renewal membership, please contact Susan Lightle at (317) 879-1881 or slightle@academyofosteopathy.org. Thank you for supporting the American Academy of Osteopathy.

Outline of Osteopathic Manipulative Procedures: Memorial Edition



by Paul E. Kimberly, DO, FAAO
Original Editor and Illustrator

Jerry L. Dickey, DO, FAAO, Editor
Kelly D. Halma, DO, Assistant Editor



Pictured: First Rib Technique

Now with extensive color photographs!

Purchase your copy at www.academyofosteopathy.org
(Select "AAO Store" from left-hand menu)

AAO-member price: \$90.00
List price: \$100.00
(plus shipping and handling)



American Academy of Osteopathy®

3500 DePauw Boulevard
Suite 1080
Indianapolis, IN 46268
P: (317) 879-1881
F: (317) 879-0563
www.academyofosteopathy.org

American Academy of Osteopathy

Michael A. Seffinger, DOPresident
Jane E. Carreiro, DOPresident-Elect
Diana L. Finley, CMP Executive Director

Editorial Advisory Board

Murray R. Berkowitz, DO, MA, MS, MPH
Denise K. Burns, DO, FAAO
Eileen L. DiGiovanna, DO, FAAO
Eric J. Dolgin, DO
Claire M. Galin, DO
William J. Garrity, DO
Stephen I. Goldman, DO, FAAO
Stefan L. J. Hagopian, DO, FAAO
John G. Hohner, DO, FAAO
Raymond J. Hruba, DO, MS, FAAO
Brian E. Kaufman, DO
Hollis H. King, DO, PhD, FAAO
Paul R. Rennie, DO, FAAO
Hallie J. Robbins, DO
Mark E. Rosen, DO

The AAO Journal

Murray R. Berkowitz, DO, MA, MS, MPH.....Scientific Editor
Diana Finley, CMP.....Supervising Editor
Tessa BoeingManaging Editor

The AAO Journal is the official publication of the American Academy of Osteopathy. Issues are published in March, June, September, and December each year.

The AAO Journal is not responsible for statements made by any contributor. Although all advertising is expected to conform to ethical medical standards, acceptance does not imply endorsement by this journal.

Opinions expressed in *The AAO Journal* are those of authors or speakers and do not necessarily reflect viewpoints of the editors or official policy of the American Academy of Osteopathy or the institutions with which the authors are affiliated, unless specified.

Send address/e-mail address changes to:
slightle@academyofosteopathy.org

THE AAO FORUM FOR OSTEOPATHIC THOUGHT

JOURNAL

Official Publication of the American Academy of Osteopathy

TRADITION SHAPES THE FUTURE • VOLUME 21 NUMBER 4 • DECEMBER 2011

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.

IN THIS ISSUE:

AAO Calendar of Events	6
CME Certification of Home Study Forms	31
2011 AAOJ Index.....	43
Component Society Calendar of Events	48

REGULAR FEATURES:

View From the Pyramids	4
<i>Murray R. Berkowitz, DO, MA, MS, MPH</i>	
From the Archives.....	41

ORIGINAL CONTRIBUTIONS:

The 2011 Thomas L. Northup, DO, Memorial Lecture—A Road Less Traveled: Osteopathy’s Legacy, Osteopathic Medicine’s Challenge.....	7
<i>Brian F. Degenhardt, DO</i>	
Manipulative methods of Dr. A.T. Still.....	19
<i>Jamie Archer, DO (UK)</i>	
What is health? What is disease? Thoughts on a complex issue	27
<i>Matthias Flatscher, PhD (Austria); Torsten Liem, DO (Germany)</i>	
OMT and exercises for a patient with limited knee range of motion prior to knee replacement: A case report.....	32
<i>Robert C. Clark, DO, MS</i>	
Sacroiliac joint sparing in a patient with ankylosing spondylitis— An osteopathic approach.....	35
<i>Joy Ishii, OMS III; Walter C. Ehrenfeuchter, DO, FAAO; Kristie M. Olds, OMS IV, UTF; Murray R. Berkowitz, DO, MA, MS, MPH</i>	

Advertising rates for *The AAO Journal*; official publication of the American Academy of Osteopathy. The AAO and AOA affiliate organizations and members of the Academy are entitled to a 20-percent discount on advertising in this journal. Call the AAO at (317) 879-1881 for more information.

Advertising Rates			
	Placed 1 time	Placed 2 times	Placed 4 times
Full Page 7.5" x 10"	\$600	\$575	\$550
Half Page 7.5" x 5"	\$400	\$375	\$350
Third Page 7.5" x 3.3"	\$300	\$275	\$200
Fourth Page 3.75" x 5"	\$200	\$175	\$150
Professional Card 3.5" x 2"	\$60		
Classified	\$1.00 per word		



Increasing the number of osteopathic graduate medical education programs—“The time has come...”

Murray R. Berkowitz, DO, MA, MS, MPH

“The time has come,’ the Walrus said, ‘To talk of many things: Of shoes—and ships—and sealing-wax—Of cabbages—and kings—And why the sea is boiling ...”

The sea is boiling due to the recent proposals by the Accreditation Council for Graduate Medical Education (ACGME) to restrict admission to ACGME residencies and fellowships to physicians who have completed ACGME or Canadian training. We have all received e-mails from the American Osteopathic Association (AOA) regarding this. AOA President Martin Levine, DO, MPH, and AOA Executive Director John Crosby, JD, have communicated the osteopathic profession’s concerns regarding the potential consequences to DOs desiring training at ACGME residencies and fellowships and also being able to keep their osteopathic training current. This can also possibly impact licensure in several states. This Academy, as well as many other osteopathic specialty colleges, has communicated these same concerns.

Let us talk of many things: Of shoes (the path we need to walk)—and ships (the hospitals, healthcare facilities and training institutes where residencies and fellowship take place)—and sealing-wax (what we may need to do to fix the problem).

The osteopathic profession currently enjoys the ability to apply for both allopathic and osteopathic GME programs. Our allopathic colleagues actually lack this advantage, as they are not permitted to apply for osteopathic GME. This has not always been true. About 40 years ago, DOs were rarely allowed to train in ACGME/allopathic residency programs. Even 20 years ago, DOs were not readily accepted at many allopathic programs. Then there were the problems of admitting and obtaining staff privileges at allopathic institutions. Although relatively rare, some of these problems persist to this day. The previous osteopathic solution was the establishment of osteopathic hospitals and the creation of osteopathic

graduate medical education (OGME) programs. Once DOs were accepted for staff privileges at allopathic institutions, things began to change. Since osteopathic institutions and the OGME programs residing therein were much smaller, there were very few opportunities to take advantage of the economies of scale found at the much larger allopathic institutions. Thus, osteopathic facilities were not as financially stable or viable and most closed.

Among the unintended consequences of the economic problems found in osteopathic facilities, the resultant house staff salaries were lower than at surrounding allopathic institutions. This further contributed to the problems of attracting DO graduates into OGME. After all, why go to an osteopathic program that pays \$25,000 for postgraduate-year-one (PGY-1) positions (as Des Moines General did in 1996) when you might be able to earn \$30,000 at Broadlawns Medical Center just 10 minutes across town? Economics had more to do with the decline of OGME than any perceptions of lack of quality on the part of newly degreed DO graduates. Fortunately, today’s salaries for both allopathic and osteopathic GME programs are greater, and there do not appear to be the same discrepancies in compensation between ACGME and OGME programs.

The predicted shortage of physicians has been well publicized. Both allopathic and osteopathic medical schools have increased both the number of schools and enrollment at existing schools. To provide fully-qualified physicians, there must also be an increase in the number of GME/OGME positions. There are approximately 24,000 allopathic PGY-1 positions and approximately 3,500 approved OGME PGY-1 positions. Unfortunately, only approximately 2,550 OGME positions are funded (from all sources). There are approximately 4,200 new DOs graduating each year. This data shows there appears to be a shortage of PGY-1 positions for DOs graduating, but about half of newly-degreed DOs enter ACGME programs upon graduating from osteopathic medical school. In 2011,

approximately 1,640 DOs entered OGME. Slightly more than 16,000 MDs enter ACGME each year. There are approximately 5,800 international medical graduates—both U.S. and non-U.S. citizens—who are admitted to ACGME programs each year.

Unfortunately, the Balanced Budget Act (BBA) of 1997 has limited the potential growth of graduate medical education—both osteopathic and allopathic. As presented in this column previously, there is a “zero sum game” with respect to the number of positions at existing healthcare institutions with GME or OGME programs. The number of positions at these institutions and facilities is fixed and may not be increased. The current result is that, although the number of medical graduates (both allopathic and osteopathic) is increasing, the number of GME/OGME PGY-1 positions remains the same.

The fear is that the time may soon come when we cannot place every newly graduated physician in a GME/OGME training program. In actuality, this is not completely true. The number of positions funded by the Centers for Medicare and Medicaid Services (CMS) is fixed. Positions may be funded from sources other than CMS, or by CMS in new healthcare facilities and institutions that currently do not have GME/OGME programs, without violating BBA provisions and restrictions.

We need to increase the number of GME and OGME positions. Until the BBA of 1997 is repealed or changed, the only way to increase the number of positions with CMS funding is to create new programs at healthcare facilities that do not currently have any programs. There is a possibility that the osteopathic profession may see a resurgence of allopathic GME programs reducing the opportunities for DOs to train in ACGME programs. The aforementioned proposed ACGME restrictions may be a portent of things to come. From the above data, we can clearly see that we will need to increase OGME to be able to train all DOs graduating. This will include not only basic residencies, but also subspecialty fellowships.

The osteopathic profession really does not have the moral high ground with regard to this concern. As mentioned earlier, osteopathic graduates enjoy the ability to apply to both ACGME and AOA programs, while allopathic graduates are limited to only ACGME programs. I previously advocated for admitting allopathic graduates to OGME with the provision they be required to obtain training in osteopathic manipulative medicine and able to demonstrate competency. This would probably require approximately one year of intensive training in osteopathic manipulation—but at least this year would add to the knowledge base of the physician and not merely be a repeat of training he/she has already completed.

There are many community hospitals that do not currently have GME or OGME programs. These offer great potential for creating new OGME programs. We need to take action and develop new programs now. We need to enlist these community healthcare facilities currently without GME/OGME programs to harvest their potential growth. We also need to garner seed money to allow for start-up efforts until any CMS funding can be put into place.

We have talked of many things—however, this is the time for action. We need to carefully plan, develop and implement new programs. We need to use the very limited “lead time” we currently possess effectively to accomplish what needs to be done to keep the osteopathic profession vibrant and robust and able to meet the needs of our patients.

References

1. Carroll L. The Walrus and The Carpenter. *Through the Looking-Glass and What Alice Found There*. 1872.
2. Berkowitz MR. Eating Our Seed Corn – Again! *American Academy of Osteopathy Journal*. September 2011;21(3):6-7.
3. Berkowitz MR. Admitting Allopathic Physicians to Osteopathic Graduate Medical Education Programs: The Case for Competency-Based NMM/OMM Training in OGME. *American Academy of Osteopathy Journal*. March 2010;20(1):6.



Faculty Position Opportunity

Touro University Nevada College of Osteopathic Medicine (TUNCOM) is seeking qualified osteopathic physicians (D.O.) for a full-time assistant professor position in the Department of Osteopathic Manipulative Medicine. Responsibilities include teaching osteopathic medical students the principles of osteopathic manipulative medicine both in the classroom and clinic settings and in providing support for program development.

TUNCOM offers qualified applicants a competitive salary that provides financial stability and an excellent benefits package.

The campus is located in sunny Henderson, Nevada which has world-class food and entertainment including neighboring Las Vegas. It is also in close proximity to Zion, Bryce and Grand Canyon National Parks and has convenient access to an international airport.

Qualifications:

- The applicant needs to be an osteopathic physician who is a graduate of an AOA-approved osteopathic medical college.
- The applicant must be licensable to practice medicine in the State of Nevada.
- Certification in neuromusculoskeletal medicine or special proficiency in osteopathic manipulative medicine is preferred though candidates who have proven experience in providing high level osteopathic manipulative medicine services will be considered.
- The applicant must have sufficient experience in the variety of osteopathic manipulative medicine techniques that are currently being taught and be familiar with basic communication tools including email, word processing and PowerPoint presentations.

If this sounds like an opportunity you may be interested in pursuing, please contact Mrs. Paula Dybdahl by email at paula.dybdahl@tun.touro.edu, telephone (702) 777-4740 or by regular mail at Touro University Nevada College of Osteopathic Medicine, Department of Osteopathic Manipulative Medicine, 874 American Pacific Drive, Henderson, NV 89014.

Touro University Nevada is an Equal Employment Opportunity Employer.

Application Closing Date: Open until filled



AAO Calendar of Events 2011 - 2012



Mark your calendar for these upcoming Academy meetings and educational courses.

- December 26** AAO office closed
- January 2** AAO office closed
- January 12 - 14** AOA/AACOM 22nd Annual Osteopathic Medical Education Leadership Conference
Fort Lauderdale, FL
- January 13 - 15** *Still-Littlejohn Techniques*—Christian Fossum, DO; Richard Van Buskirk, DO, FAAO
AZCOM, Glendale, AZ
- February 2** Membership Committee Teleconference, 8:30 pm EST
- February 10-11** Education Committee Meeting—University Place Conference Center & Hotel, Indianapolis, IN
- Feb. 29-March 3** AOA Mid-Year Board of Trustees Meeting—Miami Beach, FL
- March 19-20** *Pediatric Sports Medicine: The Young Athlete*—Jane Carriero, DO; Heather Ferrill, DO;
Doris Newman, DO—The Galt House Hotel, Louisville, KY
- March 20** *The Legacy of Stanley Schiowitz, DO, FAAO: Facilitated Positional Release and Beyond*
Dennis Dowling, DO, FAAO—The Galt House Hotel, Louisville, KY
- March 20** AOBMM written re-certification examination—The Galt House Hotel, Louisville, KY
- March 21** Residents' In-Service Examination—The Galt House Hotel, Louisville, KY
- March 21** AAO Board of Governors Meeting—The Galt House Hotel, Louisville, KY
- March 21** AAO Board of Trustees Meeting—The Galt House Hotel, Louisville, KY
- March 22** AAO Annual Business Meeting—The Galt House Hotel, Louisville, KY
- March 21-25** *The Unified Osteopathic Field Theory, AAO 75th Anniversary Convocation*
Kenneth J. Lossing, DO—The Galt House Hotel, Louisville, KY
- April 20-22** *Beginning Percussion Vibrator Course*—Rajiv Yadava, DO; Richard Koss, DO
TCOM, Fort Worth, TX
- June 8-10** *Exercise Prescription: Greenman's Method*—Brad Sandler, DO
South Pointe Hospital, Warrensville Heights, OH
- September 7-8** *Ultrasound Guided Injection*—Millicent K. Channell, DO—UMDNJSOM, Stratford, NJ
- October 6** *Mastering the Art of HVLA (Pre-AOA Convention)*—John G. Hohner, DO, FAAO
San Diego, CA
- October 8-10** *AAO Program at the AOA Convention*—Millicent K. Channell, DO, Program Chair—San Diego, CA
- October 25-27** *Prolotherapy Weekend*—Mark S. Cantieri, DO, FAAO; George J. Pasquarello, DO, FAAO
UNECOM, Biddeford, ME
- December 7-9** *Oscillatory & Energetic Integrated OMM*—Zachary J. Comeaux, DO, FAAO—COMP, Pomona, CA

The 2011 Thomas L. Northup Memorial Lecture— A Road Less Traveled: Osteopathy’s Legacy, Osteopathic Medicine’s Challenge

Brian F. Degenhardt, DO



Dr. Degenhardt

When I received notification that I had been nominated to present the Thomas L. Northup, DO, Memorial Lecture, I was honored to be considered for such a position. When I read the follow-up letter indicating that I had been chosen, I was stunned. I thought, “Such an honor is only given to those at a more advanced stage of their career.” Now that I have been forced to look in a mirror

and face the reality that much time has passed in my career, I still want to thank the Board for challenging me with this opportunity. As teachers know, the excitement that comes from learning as one prepares for this type of presentation is priceless. Thank you, American Academy of Osteopathy Board of Trustees.

Even though some people consider history stagnant, boring and irrelevant, it is full of meaningful lessons. Lessons in osteopathic history are well sustained and disseminated at the Museum of Osteopathic Medicine in Kirksville, MO. Several months ago, a curious observation was brought to my attention by the museum’s curator, Debra Loguda-Summers, and arises from dozens of photographs of Andrew Taylor Still pointing. No other individual in the museum’s collection repeatedly demonstrates this gesture. So I began to wonder, what could Dr. Still’s pointing finger mean? Of course, he means to focus other people’s attention. Dr. Still never pointed to himself, as if to say, “Hey, look at me. Focus here. Look at what I am doing or what I did.” Instead, he always points to something else, something beyond himself. It seems to me that his gesture indicates an unspoken mandate: “Look there.” “See this interesting relationship.” Or, at times, “Go that way.”

In some images, I propose that Dr. Still was pointing toward the path he wanted his successors to take Osteopathy. While Osteopathy does not require definition among the Academy’s collection of “Still descendants,” I would like you to take a moment to bring to the forefront of your

consciousness the key factors that underlie Osteopathy and osteopathic medicine. These factors are the principles or “payload” that Dr. Still carried with him as he moved along the less travelled paths of Missouri, and that he passed on to be sustained, molded, and advanced by his successors. These factors are critical as we consider the paths that the osteopathic profession has taken over the past 120 years, and the roads that osteopathic medicine could take in this century.

Still’s writings articulate the solitary, narrow and tortuous paths he walked as he tried to find a home for osteopathy.¹ Those same paths were followed by the first osteopathic practitioners (DOs) as they established new schools and obtained full practice rights.

Although we may choose some of the paths to follow, a path can be dramatically altered by external events. For the medical profession, one such event occurred in 1910. Abraham Flexner, a research scholar at the Carnegie Foundation, travelled to every medical school in the United States and Canada, including Kirksville and other osteopathic schools, to evaluate medical education.² In the Flexner Report,³ he provided a sound, but blunt and scathing, assessment of medical education in North America, exposing the mediocre quality and profit motive of many medical school administrations, the inadequate curricula and facilities, and the non-scientific approach of preparing medical students for future practice. As an example, many schools had no basic science faculty. Flexner proposed that clinical rotations, which existed at only a few schools in the United States at that time, were important for improving the quality of medicine and the science of the practice of medicine.⁴ Further, he recognized that teaching, clinical care and investigation were interconnected, particularly because most medical research in 1910 was based on the direct examination of patients.² To Flexner, research was not an end in its own right—it was important because it led to better patient care and teaching.⁵

The Flexner Report had an immediate and, in many ways, permanent impact on the medical profession. Within a short period, half of the medical schools—70 of those he listed in the “deficient” category—closed.⁴ As a result of

losing 50 percent of training spots, women and minorities, who had been enrolled in likely all medical schools by that time, were once again marginalized because the reduced number of available slots were preferentially given to white men.⁴ Even at its 100-year anniversary in 2010, the Flexner Report was still the focus of conferences and dozens of articles recognizing this man's insightful assessment and recommendations for medical education and practice. I reviewed numerous Northrup lectures in preparation for this moment, and each one focused on at least one of the three principles prioritized by Flexner: teaching, clinical care, and investigation or research.

Within the osteopathic profession, 16 schools were established in the first 15 years of its existence, but the administration at the American School of Osteopathy (ASO) in Kirksville had already begun to consolidate schools due to quality and economic issues prior to the Flexner Report. By 1920, only seven osteopathic medical schools remained.⁶

Although osteopathy survived the immediate impact of the Flexner Report, in 1926, George Laughlin, the fourth president of the newly-formed Kirksville College of Osteopathy and Surgery (KCOS, the "grandchild" of the ASO), knew that osteopathic education had deficiencies, as noted by Flexner and, as a result, osteopathic education needed to change. Basic scientists needed to be included as faculty at osteopathic schools and scientific teaching needed to be expanded in the curriculum. One path Laughlin chose to address Flexner's concerns was to engage basic scientists through research in osteopathic principles. His first step was to identify a champion for osteopathic research. He found John Stedman Denslow, DO, and gave him the resources to receive the training needed to pursue meaningful research questions related to the osteopathic paradigm using modern instrumentation and methods. Dr. Denslow's move from Chicago to Kirksville occurred 25 years after the Flexner Report, and it took another 10 years for Denslow and Morris Thompson, KCOS's next president, to bring osteopathy's first research-focused basic scientist, Irwin M. Korr, PhD, to Kirksville. So, it wasn't until 1950—40 years after its publication—that KCOS began to successfully address the primary science issues raised in the Flexner Report.

For the next decade, basic science departments were established at the school. A team of basic scientists and clinicians began performing and publishing relevant basic science research in the osteopathic paradigm. In 1960, under the leadership of Drs. Denslow, Korr, and Max Gutensohn, DO, a grant was submitted to the National Institutes of Health (NIH) and the research team received an award to build the Vascular-Neurologic Clinical Research Center to

perform clinical research studying osteopathic concepts in humans with visceral diseases. This seven-year, \$1 million award was received in recognition of the maturing basic science research program at the college and the availability of candidates to expand the program. This achievement would have provided an environment that incorporated clinical care, research and education—addressing another deficiency outlined in the Flexner Report.⁴

Although funding was given, the National Institutes of Health (NIH) reviewers raised a concern that there were no experienced clinical researchers at the school. Dr. Denslow successfully argued that it would take two of the seven years of the grant to "tool up" or train clinicians to perform research, during which time the facility to house the center was built for almost \$145,000.⁷ Additionally, records at the Museum of Osteopathic Medicine indicate that there was concern among the investigators the proposal was overly ambitious. Dr. Denslow strategized that if "we are getting in over our heads" they would scale down the basic science research program to support the clinical research program. In the end, Dr. Korr was unwilling to sign off on the award because the risk of failure for the profession and his basic science departments was too high, so the award was returned. Even though it took a half century to realize a main goal outlined in the Flexner Report, perhaps reason, perhaps fear, perhaps a combination of both, coupled with a lack of clinicians to perform clinical research, kept the profession from following a new and important path that would link osteopathy—a paradigm focused on functional interrelationships of the neuromusculoskeletal systems and manipulative treatment—to osteopathic medicine.

Thus, Osteopathy was established, sustained, and advanced for 70 years into osteopathic medicine, persevering along less travelled roads, and often against significant political and social odds. In the 1960s and early 1970s, osteopathic medicine left its narrow, tortuous paths and began to travel on the major thoroughfares of traditional medicine. In California, the California Osteopathic Association merged with the California Medical Association, and the College of Osteopathic Physicians and Surgeons changed to the California College of Medicine.⁸ DOs began to practice in the military, and in 1969, the American Medical Association (AMA) began accepting qualified DOs as members.⁹ DOs were taking osteopathic medicine down numerous roads and in many directions. Yet the profession continued to follow the roads taken by its pioneers three generations earlier—to establish new osteopathic medical schools and take the case of osteopathic medicine to state governments—this time not for licensure issues, but for funding new schools. Some within the profession hoped that government funding would provide broader resources

to achieve better professional recognition, training and research productivity, but others were concerned that this support would compromise the independence and uniqueness of the profession.

Because I recognize the complexity of managing and directing osteopathic medicine in these modern times, the remainder of my talk will address a narrow part of the osteopathic road map that focuses on the “osteopathic” of osteopathic medicine. I will discuss aspects of research and then clinical training. Unfortunately, time constraints will not allow me to capture all aspects of this important time in osteopathic history or mention all the people who contributed to this area. Instead, I will identify important highlights in the hope that this historical review will yield meaningful lessons that are useful for our present and future directions.

Michigan State University College of Osteopathic Medicine (MSUCOM), established in 1969, was the first publicly-funded osteopathic medical school. In 1975, MSUCOM reached a major mile marker along its research path. The first NIH-sponsored Symposium on The Research Status of Spinal Manipulative Therapy was held at MSUCOM, organized by Murray Goldstein, DO.¹⁰ This symposium was the first systematic, interdisciplinary review of research in spinal manipulative therapy. Its primary outcome was that there was insufficient evidence to assess the therapeutic value of spinal manipulative therapy.¹⁰ Conference attendees recommended research training opportunities be established in chiropractic and osteopathic professional schools to prioritize research in spinal manipulative therapy.

By 1978, various councils, foundations, and consortia were established to support research in manipulative therapy, and the *Journal of Manipulative and Physiological Therapeutics* was launched. These initiatives arose from the chiropractic profession.^{11,12} To begin building a research infrastructure in the osteopathic profession, MSUCOM began the first dual-degree (DO-PhD) program in the osteopathic profession in 1979. To date, 31 DO-PhD students have graduated from the program. Eleven (35 percent) of those students hold positions as faculty members at universities, medical colleges, or research institutes, such as Yale, Case Western Reserve, Vanderbilt, University of Southern California and Southern Alabama, in the areas of microbiology and molecular genetics, pediatrics, neurology and ophthalmology, pharmacology and toxicology, lung transplantation, psychiatry, anesthesiology, infectious disease and oncology. Twenty-six students are currently pursuing DO-PhD degrees in the program in a variety of classic biomedical areas, as well as in bioethics, medical anthropology and epidemiology.¹³

In 1991, 15 years after the 1975 symposium, Dr. Korr published a special communication in the *Journal of the American Osteopathic Association* (JAOA), sharing his reflections on the last 20 years of research in the osteopathic profession.¹⁴ He noted significant expansion of osteopathic colleges, some being university affiliated and publicly funded. Further, he reported that this growth expanded the pool of competent scientists to serve as teachers and researchers three-fold compared to 1970. Yet, expressed he regret that there had been little increase in research in areas most relevant to osteopathic theory and practice.¹⁴

In 1988, the American Osteopathic Association (AOA) established the Osteopathic Research and Development Fund (ORDF), which collected an additional \$40 in annual AOA dues over a decade to build financial resources to increase research, particularly in the area of manual medicine. Because of the ORDF, the AOA awarded over \$3 million in grants and fellowships from 1995 to 2001. The average size of awards in 1995 was \$18,500, and by 2001, it had more than doubled to \$41,700. An outcome of these investments was 27 publications from grant recipients and 11 from fellowship awardees, half published within the *JAOA*.¹⁵ Around 1990, the AOA promoted and funded a Clinical Investigator Development Award for three to four years. Only two awards were given before funding was eliminated because the outcomes did not seem to meet the intended goals. Overall, in the 1990s, there was a 37 percent increase in research funding within osteopathic programs. Seventy-five percent of this funding was obtained by three publicly-funded osteopathic colleges, primarily in the basic sciences, despite the AOA’s attempt to bolster clinical research in osteopathic manipulative medicine (OMM).¹⁶

With the twenty-first century came a renewed level of cooperation and drive for OMM research within the osteopathic profession. The Osteopathic Research Taskforce, consisting of representation from many constituencies within the profession, was created to promote research in manual medicine.¹⁷ They initiated and coordinated the Osteopathic Collaborative Clinical Trials Initiative Conferences, wrote a white paper outlining important directions for osteopathic research, and encouraged the AOA, the American Association of Colleges of Osteopathic Medicine, the American Academy of Osteopathy, the American Osteopathic Foundation, and numerous other osteopathic entities to identify and fund the Osteopathic Research Center (ORC), which in 2002, was given to the University of North Texas Health Science Center (UNTHSC)—an institution that had published articles for 20 years demonstrating a passion and support for osteopathic research, but whose research activities were primarily in the basic sciences.^{16,18}

continued on page 11

Still-Littlejohn Techniques

January 13 - 15, 2012 at AZCOM • William Devine, DO, Program Chair

Course Description:

This course is a revised and updated version of a course held in 2007 by the Arizona Academy of Osteopathy, a component society of the AAO. It will review, discuss, demonstrate, compare and practice osteopathic manipulative techniques dating back to the early days of the profession with a clear lineage to Dr. Andrew Taylor Still and other early pioneers, such as Dr. John Martin Littlejohn. The historical and practical context of the techniques demonstrated will be discussed and debated, with reference to contemporary understanding of biomechanics and neurophysiology.

Course Objectives:

- Provide a clear and factual understanding of the history and development of osteopathic manipulative techniques;
- Understand the mechanics of dysfunction and technique in the early phase of the osteopathic profession;
- Review modern versions of A.T. Still's and J.M. Littlejohn's techniques in the context of contemporary developments in basic and clinical sciences;
- Demonstrate and help participants learn specific applications of the Still and Littlejohn Techniques as applied to the spine, pelvis and extremities;
- Enable participants to successfully apply the learned principles and techniques in clinical practice.

CME:

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

Faculty:

Christian Fossum, DO (Norway), is the Principal of the Nordic Academy of Osteopathy in Oslo, Norway. He has previously held positions at the European School of Osteopathy (Maidstone, UK) and Kirksville College of Osteopathic Medicine. He has taught courses throughout Europe and North America, and has authored numerous articles and book chapters on osteopathic principles and practice. Dr. Fossum is currently enrolled in a doctorate program through the University of Bedfordshire and the British School of Osteopathy in London, UK.

Richard Van Buskirk, DO, PhD, FAAO, a 1987 graduate of West Virginia School of Osteopathic Medicine (WVSOM), is in private practice in Sarasota, FL. Before becoming a student of osteopathic medicine, he held positions in neuroscience and physiology at the University of Wyoming, Hahnman Medical School and WVSOM. Dr. Van Buskirk has taught numerous courses in the United States, Japan and Europe, and has contributed articles to all three editions of the *Foundations of Osteopathic Medicine* textbook.

Course Location:

Arizona College of Osteopathic Medicine
19555 North 59th Avenue
Glendale, AZ 85308
(623) 572-3215

Course Times:

Friday and Saturday: 8:00 am - 5:00 pm (lunch provided)
Sunday: 8:00 am - 12:00 pm (lunch on your own)

Travel Arrangements:

Call Tina Callahan of Globally Yours Travel at (800) 274-5975

Registration Form

Still-Littlejohn Techniques January 13 - 15, 2012

Name: _____ AOA#: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

Billing address (if different than above): _____

[Click here to view the AAO's Cancellation and Refund Policy](#)

Registration Rates

	<u>On or before 12/15/2011</u>	<u>After 12/15/2011</u>
--	--------------------------------	-------------------------

AAO member	\$ 800.00	\$ 900.00
Non-member	\$ 900.00	\$ 1,000.00
Students/Residents	\$ 700.00	\$ 800.00

The AAO accepts check, Visa, Mastercard or Discover payments in U.S. dollars

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy to charge the above credit card for the full course registration amount.

Signature: _____

American Academy of Osteopathy
3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268
Phone: (317) 879-1881 • Fax: (317) 879-0563
Register online at www.academyofosteopathy.org

In its first decade, the ORC has received more than \$21 million in funding to conduct and advance osteopathic research.¹⁹ Researchers at the ORC have received numerous NIH grants, including U19, K23, K24, K30, R13, R21 and R25, and numerous AOA and Osteopathic Heritage Foundations (OHF) awards. Despite this rejuvenated interest in the prioritization of research, the AOA did not offer funding for profession-based grants from 2002 to 2005. Starting in 2006, the AOA re-initiated funding and, since then, has provided an average of \$300,000 annually.

During the first decade of this century, additional support for research has been provided by osteopathic foundations, especially the OHF. The leadership and funding provided by the OHF has significantly leveraged the ORC's success. Further, the OHF was instrumental in coordinating foundations to fund the Multi-center Osteopathic Pneumonia Study in the Elderly (MOPSE) study²⁰ and in establishing endowed research chairs to promote research throughout the profession.²¹

In comparison to the osteopathic profession, oral reports indicate that nearly 100 doctors of chiropractic (DC) received their PhDs during the 1980s to pursue research in manipulative therapies. In 1992, the Office of Alternative Medicine (OAM) was established (Public law 102-170) **within the NIH to investigate and evaluate promising unconventional medical practices, for example, osteopathic manipulative treatment (OMT).** In 1995, because of the research infrastructure that had been developed in the 1980s within the chiropractic profession, the Palmer Center for Chiropractic Research was the first center to be funded by the NIH for the evaluation of manipulation. This center has grown and now has an annual budget of \$7 million.²² In 1999, the OAM was elevated to an NIH Center, the National Center for Complementary and Alternative Medicine (NCCAM; Title VI, Section 201, Omnibus Appropriation Act of 1999).

In June 2005, The Conference on the Biology of Manual Therapies was held at the National Institutes of Health, organized by the NIH and the Canadian Institutes of Health Research.²³ It was the first international research conference to focus on the biologic mechanisms that underlie a broad range of palpation interventions, now called "manual therapies." Just like drugs that treat inflammation or hypertension, the use of the hands to produce therapeutic responses were lumped into this single category called "manual therapies." In 2007, a nationwide government study co-funded by NCCAM reported that Americans spend nearly \$34 billion out-of-pocket on complementary and alternative medicine, and the fourth most commonly used modality was manual therapies.²⁴ In summary, over the past three decades, significant advances in the inves-

tigation and utilization of manipulative approaches have occurred.

Now I would like to consider another path travelled by osteopathic physicians: training in OMM. In the twentieth century, the hours set aside for developing palpatory and manipulative skills in American osteopathic medical schools waned. The time devoted to OMM training to receive a DO degree in the U.S. was more than 900 hours in Flexner's time, was about 480 hours at the Kirksville College of Osteopathic Medicine in 1980, and is now approximately 200 hours nationwide.²⁵ In most programs, it appears these hours are used to train students to perform manipulative treatment techniques. Since the middle of the twentieth century, DOs have reported a gradual reduction in their use of OMT in the clinic setting.²⁶⁻²⁸ In 2001, a survey of osteopathic physicians found that more than 50 percent of the respondents used OMT on less than 5 percent of their patients.²⁹ Many factors may influence the degree to which practitioners utilize OMT clinically. These factors include the educational program they attended, whether the environment in which they practice is physically and philosophically set up for performing OMT, whether there is adequate time available for treating patients with OMT, if there is reasonable reimbursement for providing OMT, and if the physicians have a sense of competence and comfort level with their palpatory abilities. Thus, the tendency of osteopathic medicine in the twentieth century was to reduce training and the provision of services in manipulative medicine.

It is important to remember that manual medicine was never isolated to Osteopathy. For centuries, physicians throughout the world were using and teaching manipulative medicine. In the second half of the twentieth century, U.S. allopathic physicians (MDs) utilizing manipulative medicine were organized within the North American Academy of Manipulative Medicine (NAAMM).³⁰ Globally, national physician organizations utilizing manipulative medicine, like NAAMM, became members of the International Federation of Manual Medicine (FIMM). In 1977, the NAAMM, which was limited to MDs, invited Paul Kimberly, DO, FAAO, and Philip Greenman, DO, FAAO, both of whom were involved with Michigan State University (MSU) training programs, to their annual conference to meet with the board of directors to discuss the extension of membership to DOs and the expansion of the academy's educational offerings. MSU was chosen as the best venue for a new manual medicine continuing medical education (CME) series, since it had DO and MD programs. At approximately the same time, Robert Ward, DO, FAAO, another faculty member from MSU, was invited to the FIMM conference in Copenhagen, Denmark, which enabled DOs to begin participating in that organization. In the spring of 1978, a team

of five DOs, which included Greenman, Kimberly, Ward and Edward Stiles, DO, FAAO, went to the Canary Islands to conduct a course for the German Federation of Manual Medicine. In August 1978, the Principles of Manual Medicine CME program was offered with Dr. Greenman as chair and Drs. Kimberly, Myron Beal, DO, FAAO, John Bourdillon, MD, and John Mennell, MD, as faculty. Forty people attended and the course was well received. The program was then expanded into a series of manipulation courses.

Another CME program was developed in the 1980s by Dr. Greenman and his associates at MSU. This program consisted of manual medicine courses for the American Academy of Physical Medicine and Rehabilitation (AAPM&R). For about 10 years, these seminars were held one to two times a year. In 1982, a physical therapist was admitted to the Principles of Manual Medicine CME course. Based on his competent performance, Dr. Mennell, president of the NAAMM, said, “We might never educate enough physicians in manual medicine so let us train physiotherapists.”³¹ The successful physical therapist quickly became a member of the program’s faculty, and physical therapists were approved to attend certain OMT courses as allowed by Michigan law.

Including both MDs and physical therapists (PTs) in osteopathic training programs was quite controversial. However, at the same time, international MDs, Vladimir Janda, for example, a physiatrist from the Czech Republic, were aggressively teaching manual medicine to physical therapists worldwide.³² Globalization of manual medicine was occurring, with or without osteopathic medicine. And so a simple premise of Drs. Greenman and Kimberly from the 1970s laid the foundation for MSUCOM’s Principles of Manual Medicine CME course path: “If they (MDs and PTs) are going to do it (manual medicine), they should learn to do it well.”³⁰ From July 1982 through June 2010, 9,643 clinicians from 12 countries participated in the MSU manual medicine CME programs—1,744 participants were DOs, 2,412 were MDs, 5,441 were PTs and 46 were Doctors of Dental Surgery.³¹

It has been 30 years since osteopathic physicians began providing OMT training programs to PTs, so how does the physical therapy profession see themselves and their role in manual therapy now? PTs promote themselves as “healthcare professionals who diagnose and treat individuals of all ages, from newborns to the very oldest, who have medical problems or other health-related conditions, illnesses, or injuries that limit their abilities to move and perform functional activities.”³³ Their goals are concerned with the prevention and promotion of healthy behaviors—the diagnosis and treatment of patients to maximize quality of life and movement potential—and the promotion of physical, psychological, emotional, and

social well being. Physical therapists use manual therapy or specific hands-on techniques, including, but not limited to, manipulation or mobilization to diagnose and treat soft tissues and joint structures to modulate pain; reduce or eliminate soft tissue inflammation; induce relaxation; and promote tissue repair, flexibility, and stability to improve movement and function.³⁴ In 2008, there were 185,500 jobs in PT. In 2009, there were 212 physical therapy education programs. Of these accredited programs, 12 awarded master’s degrees and 200 awarded doctoral degrees that require publishable research for graduation. By 2018, it is projected that there will be nearly a quarter-million jobs in PT, with manual therapy integrated into standard curricula, seminars, residencies and fellowships.³³

The last branching trail in manipulation training that originated at MSU in the late 1970s was led by John Upledger, DO. Based on research he participated in while at MSUCOM, he established the Upledger Institute and began teaching aspects of Osteopathy in the Cranial Field to the general public under the term “craniosacral therapy.” The Upledger Institute reports that they have over 90,000 alumni.³⁵

So here we are, almost 120 years after the founding of the first school of osteopathy. Congratulations descendants of Dr. Still! Over the last 50 years, you have succeeded in incorporating the principles and practices of a man who was labeled a lunatic and isolated for his ideas and behaviors, who was forced to create the discipline of Osteopathy, and whose students had to walk for decades along less travelled paths within the healthcare system, into mainstream medicine, as well as complementary and alternative medicine.

In the U.S., osteopathic medicine is now one of the fastest-growing segments in the healthcare profession, with every practitioner trained in manipulative medicine.³⁶ Published results from a recent survey found that more than 75 percent of physicians and patients felt that manipulation was safe, and over 50 percent of physicians and patients felt manipulation should be available in the primary care setting.³⁷ Systematic reviews³⁸⁻⁴⁰ and a profession-wide practice guideline⁴¹ demonstrate the therapeutic benefit of manipulation for low back pain. Manual therapy is now recognized and practiced throughout Europe, North America, Australia and Asia by chiropractors, osteopaths, osteopathic physicians, physical therapists and physiatrists.⁴² Manipulation is thriving worldwide. Within the U.S., several hundred thousand practitioners perform some form of manual therapy whose origins are from within osteopathy. Yet, reasonable estimates indicate that approximately 1,000 to 2,000 DOs routinely use manipulative medicine in their practices and another 2,000 occasionally use it in their practices.

While it was sobering to be reminded how old I have become when I received the letter about this lecture, I was just as sobered when I got to this stage in preparing my presentation. Should I be content with what the profession has accomplished within manipulative medicine or how my career is contributing to this discipline? The Stockdale principle states “You must never confuse faith that you will prevail in the end—which you can never afford to lose—with the discipline to confront the most brutal facts of your current reality, whatever they might be.”⁴³ In other words, to continue moving ahead on your path, you have to face the cold, hard reality of where you are, while at the same time looking forward to the path you want to follow. In this presentation, we have faced current reality through a review of osteopathic history and how it defined the present. Now, let’s learn from the lessons contained within this history so we can best choose which paths to take into the future.

The first, and perhaps the most obvious, lesson we need to learn from our history is that we must change our sense of time. It took the administration and staff at KCOS 40 years to address fundamental issues raised in the Flexner Report, and it took 25 years for the osteopathic profession to begin to meaningfully address the issues identified during the NIH conference on spinal manipulative therapies at MSU. The pace of life in the twenty-first century has quickened, and, if we want to participate fully in healthcare, we need to engage and capitalize on current opportunities. Thirty-five years elapsed from the NIH funding of the Vascular-Neurologic Clinical Research Center to the funding of the Palmer Center for Chiropractic Research. What could this profession have accomplished in those 35 years? We missed an opportunity to lead.

Second, we need to provide adequate investment in research so it can produce meaningful outcomes. The osteopathic profession cannot expect meaningful research from an annual investment of \$300,000. In most areas of research, this amount would buy one piece of equipment. It would not support two pilot projects within the NIH R21 mechanism, which is structured to support “exploratory/developmental research for early and conceptual stages of project development.”⁴⁴ Even though we recognize the importance of rigorous research to advance scientific understanding and patient care, as articulated by Flexner, we need to provide adequate resources and training, as was done for Dr. Denslow, so current and future osteopathic physicians can accomplish rigorous research. The profession needs to invest to garner meaningful outcomes, knowing that these outcomes will facilitate obtaining greater investment.

To better utilize our resources for research, we need to break down barriers within and between various

osteopathic professional organizations. We need to avoid the inclination to control and “do it alone.” We need to combine resources and leverage funding for success. If current DOs would invest \$20 in the ORDF annually, the AOA annual investment for research could increase to \$500,000. Then through partnerships, matching funds could be obtained resulting in \$1 million designated annually for osteopathic research. You, the members of the American Academy of Osteopathy, have taken the initiative to support research and education by establishing the Foundation for Osteopathic Research and Continuous Education (FORCE). Be wise investors as you venture down this important path as a funder and facilitator of research and education by leveraging your resources with other entities in a timely fashion.

However, we also need to recognize that funding and doing research are not the same as succeeding in research. Currently, reimbursement in medicine is being transformed from fee for service to fee for successful outcomes. This model should be established within the osteopathic research community to insure that quality outcomes are achieved with the profession’s investment. Research activities need to be monitored on multiple levels, from oversight of individual projects and researchers, to assuring that colleges and clinical training sites are held accountable through the accreditation process for adequately prioritizing research and providing ample resources to basic science and clinician researchers.

Yet, as I try to learn the lessons offered by history, in the back of my mind, I continue to hear the voices of the past: “If they (medical doctors, physical therapists and now, others) are going to do it (manipulative medicine/manual therapy), they should learn to do it right.” How do we, as osteopathic physicians, know what is right? Thus, the third lesson from osteopathic history is that we need to hold ourselves accountable for our claims. Current evidence indicates that those who perform diagnostic and therapeutic palpation know very little about these activities. We know that when researchers have tried to objectify and determine the reliability of palpatory skills, they have failed for most palpatory tests. In 2011, manipulation remains primarily an art, not a science. Thomas L. Northup, an influential leader in the establishment of the AAO who is honored in this memorial lecture, stated, “The art of palpation is one that must be developed. The ability to evaluate the ‘feel’ of the tissues can be developed only by practice and conscientious application to an extraordinary degree.”⁴⁵

For the past 50 years, the curricular hours in OMM have been significantly reduced profession-wide. And while teaching methods have not significantly changed, content from new research and new technique approaches has increased. It appears that, within the profession’s basic

training, the “practice and conscientious application” of palpation has been undermined. Conversely, in the past 30 years, through the establishment of fellowships and residencies, a minority of DOs have received OMM training “to an extraordinary degree.” These educational patterns correlate directly with OMM practice characteristics—few physicians performing OMM on a regular basis. At the A.T. Still Research Institute in Kirksville, MO, we have developed CME programming called Advancing Skills in Osteopathy, which incorporates objective techniques and state-of-the-art instrumentation to provide clinicians objective feedback about their palpation skills.⁴⁶ The expectation is that through the “practice and conscientious application of palpation to an extraordinary degree” coupled with instrumentation, palpation skills of osteopathic manipulative practitioners can become more objective, more reproducible and thus, scientifically meaningful. Our hope is that these new teaching methods, incorporating objective tools during the development of palpation skills, will rejuvenate future basic osteopathic manipulative medicine training in support of Dr. Northup’s views.

Yet the issue remains, how do we know what is right? This question goes back to Dr. Still. How did he know Osteopathy was right? In my opinion, he concluded that his principles and practices seemed fundamentally correct based on his critical systematic observations of body structure and his deductive reasoning regarding body function. Yet, he never stopped observing, learning and advancing his thought processes, and he challenged his successors to do the same. Today, systematic, rigorous observations remain the foundation of science, but deductive reasoning has been replaced by hypothesis-driven research that leads to level-one evidence. Consequently, at this time, we do not know what is right. However, by using modern data collection tools and research methods, every osteopathic physician who utilizes manipulative medicine has the potential of contributing to databases consisting of rigorously and systematically obtained observations by participating in a practice-based research network. From such a database, we can learn what works and what does not in manipulative medicine, and from that data, we can establish rigorous randomized, controlled studies that lead to an evidence-based form of osteopathic healthcare. DO-Touch.net, established in 2008, is a practice-based research network that gives practicing DOs the opportunity to collaborate and coordinate their clinical activities to update a century of anecdotal observations. Its mission is simple and clear—to evaluate and advance the practice of osteopathic manipulative medicine. Achieving the goals of this network is critical for osteopathic manipulative medicine now—not in five, 25 or 50 years.

Within the educational system, dual-degree programs now exist at several osteopathic colleges. While these programs have produced a few clinician researchers within the neuromusculoskeletal arena, they need to be expanded and promoted to current and future osteopathic students. These programs are critical to advance the educational, clinical and research infrastructure of the profession and the profession’s contribution to the healthcare system. Yet, even in the most ideal circumstances, it will take at least a decade for these programs to produce enough active researchers within neuromusculoskeletal medicine to have an impact on the healthcare system. In this interim, the Consortium for Collaborative Osteopathic Research Development (CONCORD) program developed at the ORC, provides current osteopathic physicians an opportunity to improve their research skills, increasing research capacity within the profession now.⁴⁷

Charles Darwin stated, “In the long history of human kind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed.”⁴⁸ Osteopathic physicians, particularly those who clinically utilize manipulative medicine, need to actively build meaningful collaborations, not only to improvise, but to innovate. This innovation needs to occur on several levels. First, there are numerous basic science disciplines where techniques have been developed to evaluate human structure, function, and dysfunction—all key factors of osteopathic principles. Establishing collaborations between osteopathic clinicians and these scientists is an opportunity to refine research questions based on clinical experience. This collaboration will result in the advancement of our understanding of structure and function and the practice of manipulative medicine. Second, we need to build the infrastructure to perform comparative effectiveness studies, which are studies that evaluate the outcomes of various treatment approaches for specific conditions. This infrastructure can be built by those participating in osteopathic PBRNs, such as DO-Touch.net and CONCORD. Currently, there is keen interest and funding at the federal level for studying comparative effectiveness. But this funding may not be available in five years, and if my observations are right, it won’t be present in 10 years. We need to advance manipulative medicine by collaborating and learning with chiropractors, physical therapists, and other honest and conscientious disciplines whose skills can be important in improving the understanding of body function and patient care.

The future of osteopathic medicine is based on the decisions we make and the subsequent activities we perform today. Dr. Still stated, “Let us not be governed today by what we did yesterday, nor tomorrow by what we do

continued on page 16

Pediatric Sports Medicine: The Young Athlete

March 19-20, 2012 at the Galt House Hotel

Program Chairs: Jane Carreiro, DO; Heather Ferrill, DO

Course Description

This two-day intensive course will provide participants with an osteopathic approach to common sports injuries in young athletes, focusing on the lower extremity. It will also present discussions on the influence of growth and development on movement patterns and training practices, in addition to osteopathic diagnosis and techniques.

Topics Covered

Common ethesopathies and aphositis in the lower extremities; overuse syndromes; muscle strains; meralgia parastetica; compartment syndrome; postural imbalances; foot mechanics; patella-femoral syndrome; Osgood Schlater syndrome; tibia and fibula dysfunction; and ligamentous injuries.



Hotel Information

Galt House Hotel
140 N. Fourth St., Louisville, KY 40202
Reservations Phone: 1-800-843-4258 or
(502) 589-5200
www.galthouse.com

Flight Reservations

Globally Yours Travel
Please call Tina Callahan at 1-800-274- 5975

Faculty

Doris Newman, DO, graduated from the University of New England College of Osteopathic Medicine (UNECOM) in 1998. She completed a traditional rotating internship and a year-long internal medicine residency, at Saint Vincent's Hospital in Worcester, MA. Back at UNECOM, she completed an NMM/OMM residency, and was Chief Resident her final year. Following her certification by the American Osteopathic Board of Neuromusculoskeletal Medicine, Dr. Newman was appointed Assistant Professor in the Department of Osteopathic Principles and Practices (OPP) at UNECOM, where she served on numerous committees and in several leadership roles, including as Residency Program Director and interim Director of Medical Education. She currently works in the OPP Department at NOVA Southeastern University College of Osteopathic Medicine.



Prerequisites

The participant should have a basic understanding of functional anatomy.

CME

16 hours of Category 1-A CME credit are anticipated.

Registration Form

Pediatric Sports Medicine: The Young Athlete
March 19-20, 2012, 8:00 am - 5:30 pm

Name: _____ AOA#: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

Billing Address (if different than above): _____

Registration Rates

On or before 2/20/2012; After 2/20/2012

AAO Member	\$ 650.00	\$ 750.00
Member with Convo Reg.	\$ 585.00	\$ 685.00
AAO Non-Member	\$ 750.00	\$ 850.00
Non-Member with Convo Reg.	\$ 685.00	\$ 785.00

The AAO accepts check, Visa, Mastercard or Discover payments in U.S. dollars

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy to charge the above credit card for the full course registration amount.

Signature: _____

[Click here to view the AAO's Cancellation and Refund Policy](#)

**Please submit registration form and payment via mail to the American Academy of Osteopathy,
3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268 or by fax to (317) 879-0563.**

Register online at www.academyofosteopathy.org

today, for day by day we must show progress.⁷⁴⁹ We cannot change the past, but we can understand and learn from it so that we make good choices regarding the roads we choose and travel along into the future. While much of this presentation has focused on the manipulation component of the profession, these comments should be considered in the context of the entire picture of osteopathic medicine. Even before Dr. Still's death, the decision to follow the path of osteopathic medicine, and not just Osteopathy, had been made. Because of the decisions of our predecessors and the daily pursuit of their goals, the current DO skill set allows each clinician, and the profession, the option to choose several roads to take in the future: one that focuses on medicine only, one that primarily focuses on osteopathy and manipulation and one that accepts the challenges of incorporating both.

While manipulation may have been a unique and defining part of osteopathic medicine, it has now been incorporated into many areas of the healthcare field, fulfilling a desire of Dr. Still. This dissemination of manipulative skills should not anger or frustrate us. We should expect this. If a unique or new skill is found to be meaningful in any field of medicine, it will, and should, be incorporated across other related healthcare fields. At this time, osteopathic medicine remains unique in the healthcare field. That uniqueness is not simply due to manipulation, and we should promote and advance that uniqueness. But defining and demonstrating that uniqueness beyond manipulation has not been simple.

I asked at the beginning of this lecture for you to bring to the forefront of your consciousness the key factors of Osteopathy and osteopathic medicine. In my opinion, Dr. Still's life indicates these key factors come from a commitment to optimize each individual's life by engaging the common and unique characteristics of every patient, not confined by economic motives and not satisfied with outcomes from care based only on current practice standards or population statistics. Osteopathy was founded upon an intimate relationship with promoting individual patient health, and now osteopathic medicine has a legacy of patient advocacy and patient empowerment to promote health—not patient dependency and control by external influences. We try to educate and empower patients instead of forcing them into a fearful, subjugated mass of cells, whose emotions and spirits are manifestations of uncontrollable chemical or social imbalances. The osteopathic legacy not only acknowledges, but supports, patients' spirits in the search for health and the treatment of disease, even in a time when such language seems feared and avoided. Key to osteopathic medicine is the motivation to know more, to understand more thoroughly, to acknowledge the unknown,

to learn and appreciate the laws of nature, and to work with those laws rather than to subjugate or destroy them. The legacy of osteopathic medicine, by its nature, represents a reform and a revolution in medical practice that is desperately needed in our healthcare system now, not just during the nineteenth and twentieth centuries.

These key features of Dr. Still's Osteopathy continue to challenge us as we choose which paths, roads, flight patterns or orbits to carry osteopathic medicine through this century. While some of the paths we choose will be larger and more crowded compared to those of our past, if we are not careful, if we have not learned from the lessons of our past, we may be overwhelmed by the man-made complexities of modern life. Our ability to manifest these key factors requires objectively recognizing our current strengths and weaknesses, using clarity and focus to determine the directions we wish and need to take, actively participating to improve deficiencies in our educational and research programs (still relevant challenges articulated in the Flexner Report), providing osteopathic patient care to the best of our abilities while monitoring outcomes using current methodologies, and entering into innovative collaborative relationships to advance our understanding of human health.

Remember, Dr. Still never pointed at himself. He pointed away from himself to focus our attention on things that were important and on the initial direction for his students to take osteopathy. Although Dr. Still's final words to the profession were supposedly, "Tell the boys to keep it pure," he wasn't talking about manipulative techniques (he abhorred teaching techniques). Underlying the traditional osteopathic tenets, he was talking about the key factors of osteopathy: ruthless patient advocacy in the midst of a system controlled by convenient, self-serving care, and the desire or intention to practice, advance and disseminate the best form of healthcare for the world's population using the most successful methods available, not just manipulation. In his pointing, perhaps Dr. Still knew that the path he was pointing at was not his to take, but his to share with each of us. It was a path to empower our future, not control it. He was pointing to empower us.

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black,
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I-
I took the one less traveled by,
And that has made all the difference.⁵⁰

Robert Frost, 1874 -1963

References

1. Still AT. *Autobiography of Andrew T. Still*. Kirksville, MO: A.T. Still; 1897.
2. Markel H. Abraham Flexner and his remarkable report on medical education: a century later. *JAMA*. 2010;303(9):888-890.
3. Flexner A. Medical education in the United States and Canada. www.carnegiefoundation.org/sites/default/files/elibrary/Carnegie_Flexner_Report.pdf. Accessed August 18, 2011.
4. Mitka M. The Flexner report at the century mark: a wake-up call for reforming medical education. *JAMA*. 2010;303(15):1465-1466.
5. Cooke M, Irby DM, Sullivan W, Ludmerer KM. American medical education 100 years after the Flexner report. *N Engl J Med*. 2006;355(13):1339-1344.
6. Historic reference of osteopathic colleges. The History of Osteopathic Medicine Virtual Museum Web site. <http://history.osteopathic.org/collegehist.shtml>. Accessed November 28, 2011.
7. Denslow JS, Korr IM, Wright HM. Research Papers, unpublished. Museum of Osteopathic MedicineSM.
8. Howell JD. The paradox of osteopathy. *N Engl J Med*. 1999;341(19):1465-1468.
9. Osteopathic medicine in the United States. Wikipedia Web site. http://en.wikipedia.org/wiki/Osteopathic_medicine_in_the_United_States. Accessed August 20, 2011.
10. Goldstein M. *The Research Status of Spinal Manipulative Therapy*. Bethesda, MD: Department of Health, Education and Welfare; 1975. Publication No. (NIH) 76-998. NINDS Monograph No. 15.
11. Phillips RB, Adams AH, Sandefur R. Chapter IX: chiropractic research. <http://chiroweb.com/ahcpr/chapter9.htm>. Accessed August 21, 2011.
12. History of chiropractic. Wikipedia Web site. http://en.wikipedia.org/wiki/history_of_chiropractic. Accessed August 21, 2011.
13. McCormick J. MSUCOM DO-PhD program data. Personal communication. August 2011.
14. Korr IM. Osteopathic research: the needed paradigm shift. *J Am Osteopath Assoc*. 1991;91(2):156,161-168, 170-171.
15. Rose RC, Prozialeck WC. Productivity outcomes for recent grants and fellowships awarded by the American Osteopathic Association Bureau of Research. *J Am Osteopath Assoc*. 2003;103(9):435-440.
16. Guillory VJ, Sharp G. Research at US colleges of osteopathic medicine: a decade of growth. *J Am Osteopath Assoc*. 2003;103(4):176-181.
17. Degenhardt BF, Stoll ST. Research priorities in osteopathic medicine. In: Chila AG, ed. *Foundations of Osteopathic Medicine*. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2011:1039-1052.
18. Rubin BR, Rose RC. AOA Bureau of Research provides retrospective on 2000 Research Conference. *J Am Osteopath Assoc*. 2001;101(3):154-155.
19. Research at the Osteopathic Research Center. University of North Texas Health Science Center Web site. www.hsc.unt.edu/orc/research.html. Accessed September 4, 2011.
20. Noll DR, Degenhardt BF, Morley TF, et al. Efficacy of osteopathic manipulation as an adjunctive treatment for hospitalized patients with pneumonia: a randomized controlled trial. *Osteopath Prim Care*. 2010;4:2.
21. Osteopathic medical research. Osteopathic Heritage Foundations Web site. www.osteopathicheritage.org/FundingPriorities/EducationResearch/medicalresearch.aspx. Accessed October 14, 2011.
22. Palmer Center for Chiropractic Research. Palmer College of Chiropractic Web site. www.palmer.edu/PalmerCenterForChiropracticResearch/. Accessed October 13, 2011.
23. Conference on the Biology of Manual Therapies. National Center for Complementary and Alternative Medicine Web site. <http://nccam.nih.gov/news/events/Manual-Therapy/manual-conference.htm>. Accessed August 4, 2011.
24. Barnes PM, Bloom B, Nahin RL. Complementary and alternative medicine use among adults and children: United States, 2007. *Natl Health Stat Report*. 2008;12. <http://www.cdc.gov/nchs/data/nhsr/nhsr012.pdf>. Accessed November 28, 2011.
25. Curriculum. American Association of Colleges of Osteopathic Medicine Web site. www.aacom.org/data/curriculum/pages/default.aspx. Accessed November 18, 2011.
26. Koch H. Office visits to doctors of osteopathy: National Ambulatory Medical Care Survey, United States, 1975. *Adv Data*. 1978;25. http://www.cdc.gov/nchs/data/series/sr_16/sr16_003.pdf. Accessed November 28, 2011.
27. Fry LJ. Preliminary findings on the use of osteopathic manipulative treatment by osteopathic physicians. *J Am Osteopath Assoc*. 1996;96(2):91-96.
28. Johnson SM, Kurtz ME. Osteopathic manipulative treatment techniques preferred by contemporary osteopathic physicians. *J Am Osteopath Assoc*. 2003;103(5): 219-224.
29. Johnson SM, Kurtz ME. Diminished use of osteopathic manipulative treatment and its impact on the uniqueness of the osteopathic profession. *Acad Med*. 2001;76(8):821-828.
30. Greenman P. Personal communication. September 2011.
31. Michigan State University Continuing Medical Education office. Unpublished document. Reviewed June 2011.
32. Vladimir Janda citation list. www.chiro.org/LINKS/ABSTRACTS/Janda.shtml. Accessed November 19, 2011.
33. Physical therapists. United States Department of Labor Web site. <http://www.bls.gov/oco/ocos080.htm>. Accessed July 24, 2011.
34. Physical therapy. Wikipedia Web site. http://en.wikipedia.org/wiki/Physical_therapy. Accessed August 4, 2011.
35. Upledger Institute International Web site. <http://www.upledger.com/aboutUs.asp>. Accessed October 18, 2011.

36. American Osteopathic Association. 2011 Osteopathic Medical Profession Report. www.osteopathic.org/inside-aoa/about/who-we-are/aoa-annual-statistics/documents/2011-OMP-report.pdf. Accessed November 20, 2011.
37. Stoll ST, Russo DP, Atchison JW. Physicians' and patients' attitudes toward manual medicine: implications for continuing medical education. *J Contin Educ Health Prof.* 2003;23(1):13-20.
38. Licciardone JC, Brimhall AK, King LN. Osteopathic manipulative treatment for low back pain: a systematic review and meta-analysis of randomized controlled trials. *BMC Musculoskelet Disord.* 2005;6:43.
39. Bigos S, Bowyer O, Braen G, et al. *Acute Low Back Problems in Adults*. Clinical Practice Guideline No. 14. Rockville, MD: Agency for Health Care Policy and Research, US Public Health Service, Department of Health and Human Services; 1994.
40. Bronfort G, Haas M, Evans RL, Bouter LM. Efficacy of spinal manipulation and mobilization for low back pain and neck pain: a systematic review and best evidence synthesis. *Spine J.* 2004;4(3):335-356.
41. Clinical Guideline Subcommittee on Low Back Pain. American Osteopathic Association guidelines for osteopathic manipulative treatment (OMT) for patients with low back pain. *J Am Osteopath Assoc.* 2010;110(11):653-666.
42. French HP, Brennan A, White B, Cusack T. Manual therapy for osteoarthritis of the hip or knee – a systematic review. *Man Ther.* 2011;16(2):109-117.
43. Collins J. *Good to Great*. New York, NY: Harper Collins;2001:83.
44. NIH exploratory/developmental research grant award (R21). National Institutes of Health Web site. <http://grants.nih.gov/grants/funding/r21.htm>. Accessed November 25, 2011.
45. Northup TL. Reflex diagnosis. *J Osteopath(Kirksville).* 1961;Dec:18-26.
46. A.T. Still Research Institute. A.T. Still University Web site. www.atsu.edu/research/education_training/index.htm. Accessed November 24, 2011.
47. Consortium for Collaborative Osteopathic Research Development – Practice Based Research Network (CONCORD-PBRN). University of North Texas Health Science Center Web site. www.hsc.unt.edu/orc/CONCORD-PBRN.html. Accessed October 23, 2011.
48. Charles Darwin quotes. Brainy Quote Web site. www.brainyquote.com/quotes/authors/c/charles_darwin.html. Accessed November 24, 2011.
49. Still AT. Quote. *J Osteopath (Kirksville).* 1898;5(3):127.
50. Frost R. "The Road Not Taken." The Academy of American Poets. Poets.org Web site. <http://www.poets.org/viewmedia.php/prmMID/15717>. Accessed November 29, 2011.

Accepted for Publication: November 2011

Address correspondence to:

Brian F. Degenhardt, DO
 bdegenhardt@atsu.edu

Editor's Note: During the AOA Convention in October/November, AAO President Michael A. Seffinger, DO, presented the 2011 Thomas L. Northup, DO, Memorial Lecturer Award to Dr. Degenhardt. This article reflects Dr. Degenhardt's speech given at that time.

BOOKS & BONES

from Pacific Distributing
 951-677-0652

Featured Releases

- **Human Embryology: From a Biodynamic Perspective** 6 DVD Set - 12 hours of Lecture Brian Freeman **\$119.95**
- **Visceral Osteopathy: The Peritoneal Organs** **\$85.00**
- **The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication, and Self-Regulation** Stephen Porges PhD. **\$45.00**
- **Dissection of the Brain & Spinal Cord DVD** Chikly **\$75.00**
- **Anatomy of the Human Embryo: A Scanning Electron Microscopic Atlas** G. Steding **\$246.00**
- **Strolling Under the Skin Micro-cinematography DVD of the Fasciae Tissue** Jean-Claude Guimberteau **\$53.95**
- **Protoplasm of a Slime Mold - Now in DVD** Newly Re-Mastered from original film William Seifriz **\$29.95**
- **Pediatric Manual Medicine: An Osteopathic Approach** Jane Carreijro, D.O. **\$74.95**
- **In the Realm of Hungry Ghosts** Gabor Mate' **\$17.95**
- **On Hope and Healing: For Those Who Have Fallen Through the Medical Cracks** Neil Nathan, MD **\$19.95**
- **Visceral and Obstetric Osteopathy** Caroline Stone **\$83.95**

39582 Via Temprano • Murrieta, CA 92563

booksandbones@verizon.net 951-677-0652 Fax 951-677-3911

www.booksandbones.com

- | | |
|---|--------------|
| 5 yr. old Child Skull with Calvarium Cut | \$237 |
| 1 yr. old Child Skull with Calvarium Cut | \$237 |
| 40 week Fetal Skull (full term) with Calvarium Cut | \$187 |
| Fetal Skulls • 20-22-29-30-31-32-34-35-40-40 1/2 weeks | \$71 |
| Male or Female sacrum w/ sacral nerve canal open | \$65 |
| Sphenoid and Occiput Set From Germany made by Somso | \$130 |
| 3B Re-Articulating 22 Piece Skull - New Price Reduction | |
| Pastel colors • Good sutural detail • Easy disassembly / assembly • Ideal for teaching and educating patients | \$347 |



Swiss Disarticulated Skull

This museum quality disarticulated skull is hand molded in limited quantities to ensure the finest possible fit and finish. All pieces have the exact weight, texture, color and feel of real bone. The entire vault and base will re-articulate on sutural contact without the use of snaps or eyelets. The frontal has an open metopic suture and the occiput has beautiful wormian bones. Comes with a hard shell, foam lined case. Call for more details. **\$1085.00**

The Legacy of Stanley Schiowitz, DO, FAAO Facilitated Positional Release and Beyond

March 20, 2012 at the Galt House Hotel, Louisville, KY

Course Description

Stanley Schiowitz, DO, FAAO, was an innovator with over sixty years experience in the application of osteopathic philosophy, principles and practices. Facilitated Positional Release (FPR) was but one of his legacies, and, as a modality, it employs aspects that make for quick diagnosis and treatment of somatic dysfunction with very efficacious results. Dr. Schiowitz did not limit himself to just FPR, but extended clinical application to make certain somatic dysfunctions were found and fixed in rapid fashion. This course is designed only for experienced osteopathic physicians with some basic knowledge of the application of FPR who want to go beyond the basic level and expand their knowledge to difficult clinical scenarios. It will include elements of FPR and beyond so as to make the participant more efficient in time and results, as well as integration with other aspects of osteopathic manipulative medicine.



Objectives

1. Learn the application of osteopathic principles to apply concepts of structure and function to diagnosis;
2. Learn diagnosis of specific dysfunctions and regional problems;
3. Demonstrate treatment of patients in sitting, supine and sidelying positions utilizing Facilitated Positional Release and adaptations; and
4. Learn indications and contraindications.

Program Chair

Dennis J. Dowling, DO, FAAO, is a 1989 graduate of New York College of Osteopathic Medicine (NYCOM). He specializes in Osteopathic Manipulative Treatment in private practice in Syosset, NY, and is the Director of Manipulation in the Department of Physical Medicine and Rehabilitation at Nassau University Medical Center in Long Island, NY. He is also Director of Osteopathic Manipulative Medicine Assessment for the National Board of Osteopathic Medical Examiners Clinical Skills Testing Center. Dr. Dowling is the Former Chair of the OMM Department at NYCOM, and is a past president of the AAO. In addition to co-editing *An Osteopathic Approach to Diagnosis and Treatment*, he is a contributor and illustrator for several other textbooks and journals, and frequently lectures throughout the United States and abroad.

CME

Six hours of Category 1-A CME credit are anticipated.

Hotel Information:

140 N. Fourth St., Louisville, KY 40202
Reservations Phone: 1-800-843-4258 or (502) 589-5200
www.galthouse.com

Flight Reservations

Globally Yours Travel
Please call Tina Callahan at 1-800-274-5975

Registration Form

The Legacy of Stanley Schiowitz, DO, FAAO
March 20, 2012, 12:00 pm - 6:00 pm

Name: _____ AOA#: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

Billing Address (if different than above): _____

Registration Rates

On or before 2/20/2012; After 2/20/2012

AAO Member	\$ 204.00	\$ 304.00
Member with Convo Reg.	\$ 190.00	\$ 290.00
AAO Non-Member	\$ 304.00	\$ 404.00
Non-Member with Convo Reg.	\$ 290.00	\$ 390.00

The AAO accepts check, Visa, Mastercard or Discover payments in U.S. dollars

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy to charge the above credit card for the full course registration amount.

Signature: _____

Click here to view the **AAO's Cancellation and Refund Policy**

**Please submit registration form and payment via mail to the American Academy of Osteopathy,
3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268 or by fax to (317) 879-0563.
Register online at www.academyofosteopathy.org**

Manipulative Methods of Dr. A.T. Still

Jamie Archer, DO (UK)

The story of Dr. Andrew Taylor Still and his early struggles in the development of Osteopathy is a fascinating one. In the beginning, Dr. Still treated and demonstrated on patients with all kinds of conditions using only his hands as he travelled around the American Midwest. He treated patients anywhere he could, such as on the floor, against a tree or door jamb, on a chair or stool, backed up against a box of goods, or with his foot resting on a fence. In those very early days, he did not have the luxury of an office that most of us have today.^{1,2} His courage and belief drove him as he built a successful school and respected profession. It is humbling to think that, without this one man's determination and search for the truth, I would not be sitting here writing this in England and you would not be doing me the honor of reading it.

Dr. Still, the discoverer of our science, is a very interesting man indeed. He possessed numerous skills and had many interests, both inside and outside of Osteopathy. To comment on these individually would fill, I am sure, the pages of a very large book. Personally, I find all things having to do with Dr. Still fascinating, and we as a profession are constantly learning more and more about this great man as new information about him and his life frequently comes to light.

Not a great deal is known regarding his manipulative methods, however. Many patients and students believed Dr. Still possessed clairvoyant-type powers and found his technique difficult to copy. This is no doubt why he initially hesitated to write down his technique—for fear that his students would just imitate him and not think for themselves. He had been developing Osteopathy for nearly 20 years, aiming to improve upon the medicine of the day, and his early students did not always understand what he was doing. Dr. Still was a philosopher, a thinker, a reasoner and a keen observer. He wanted his students to be the same and to grasp the principles of his new discovery.

In addition to initially not writing down his methods, Dr. Still, as far as we know, did not teach technique. He may, however, have had a change of heart later in his life, as there is evidence that Dr. Still was granted copyright by the Library of Congress in 1899 to create a book on illustrated practice.³ Unfortunately, the book was never published. He did, though, treat and demonstrate in the operating rooms of the infirmary of the American School of Osteopathy (ASO), insisting treatment be of a soothing,

inhibitory and quieting character, not a rough manipulation, which would only serve to increase the inflammatory state of the tissues.⁴ However, he rarely did the same thing twice, which caused much frustration and confusion among his students, as they could not figure out what he was doing. This inability to copy Dr. Still may have been the reason why his delicate precision and long leverages were all but discarded, being replaced by dreaded general treatments, as well as the solitary thrust type of technique.

This does not mean Dr. Still was not specific in his treatment—there is no doubt that he was—but specificity can mean different things to different people. A quote from Dr. Still during the 1920s sums it up: “By specific I do not mean a treatment lasting three minutes or five minutes, but a treatment, every movement of which has a definite object in view.”⁵ In other words, osteopathic treatment is not governed by the clock or whether cavitation occurs.

Dr. Still cared little for the popping and clicking type of technique, stating, “When the instructor asks if it is good, sensible practice to pull, twist, strain or jerk a neck, spine or rib until it cracks or makes a noise, tell him he who has no object in adjusting a neck but to hear it crack is a brainless bigot of whom a mature mechanic would be ashamed.”⁶

Dr. Arthur Hildreth, a graduate of the first class of the ASO and a personal friend of Dr. Still's, recalls how Dr. Still paid great attention to the soft tissues as a preliminary to any attempt at setting a bone (as it was often called). He would not attempt a correction until the soft tissues had been prepared to the point where the correction had a reasonable chance of being maintained.⁴ This, of course, may take one treatment or many, depending on the case. Philip A. Jackson told the story of Dr. David Clark, an 1898 ASO graduate whose own neck injury was treated by Dr. Still every day for three weeks using only soft tissue treatment before any correction was made.⁷

Although there were those cases that produced the so-called miracle cures, where patients were given almost instant relief, Osteopathy was born during a time where the quick fix was not necessarily expected. According to Emmons Rutledge Booth, quick results were often viewed with suspicion, with patients fearing that some kind of witchcraft had been worked upon them.¹ Most expected their treatment to take time, such that the inns and local residents' houses were full of patients for months on end.

But how did Dr. Still learn his manipulative methods? Well, he no doubt looked into many of the therapies and methods of the time, along with possibly being influenced by philosophical and scientific works.⁸ However, I believe he ultimately just worked them out for himself. Remember that he was a practical man—a farmer with an excellent mechanical mind—and, although not a new concept, he likened the human body to a machine. With his knowledge of mechanics and a thirst for studying anatomy, he developed his own methods and approach to treating the body.

What Dr. Still actually did is both a mystery and a fascination. It has been more than 90 years since Dr. Still passed away, and all those who had any personal knowledge of the Old Doctor's methods are long gone. There are existing eyewitness accounts of him treating patients, but they lack real detail.^{1,2,9} There are those who believe he practiced what has come to be called the Still Technique.¹⁰ Maybe this is true, but I do not think so—certainly not exclusively anyway. The name “Still Technique” is unfortunate, as it implies this form of manipulation was used solely by the founder, when in fact it appears he employed many methods to adjust the body, just like today's practitioners. That is not to say the Still Technique is not an excellent treatment tool—it is—but it is based on descriptions of techniques written by Dr. Charles Hazzard, an early faculty member of the ASO, and not by Dr. Still himself.¹¹

A problem with these, and indeed all written accounts, is possible misinterpretation of what was actually witnessed, along with the interpretation of those reading the account many years later. These points are brought to light when Dr. Richard Van Buskirk, author of *The Still Technique Manual*, questions Dr. Hazzard's accounts—in particular, whether a direct force really needs to be introduced onto a specific spinal element or first rib, or if a strong force is really necessary. Dr. Van Buskirk's own queries raise doubts about Dr. Hazzard's descriptions as a source of Dr. Still's technique.¹⁰

The Still Technique as described by Dr. Van Buskirk suggests that the Old Doctor used a technique that was first indirect, then direct—referring to an initial exaggeration of the lesion. However, it then suggests that a single application to a single tissue/structure was used without any repetition.¹⁰ We know from his writings that Dr. Still addressed the whole body and considered not just tissues, but regions and underlying physiology, as can be seen from some of his quotes below.¹²

“Normalize every bone of the whole spine and limbs.”

“Proceed to adjust all variations in every joint from the occiput to the lumbar spine and ribs.”

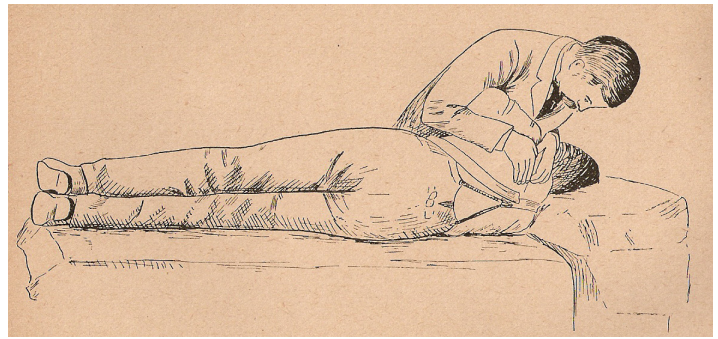


Figure 1: Freeing the vital forces and equalizing the circulation¹⁵



Figure 2: Stretching the sciatic nerve¹⁵

“...not leaving my patient until I have perfect articulation from the sacrum to the occiput.”

“...free up the axillary system...”

“...open up the blood vessels of the axilla on both sides of the body...”

“Treat the splanchnic area thoroughly.”

When writing down a manipulative method, only the principal movements need to be given in order to avoid prescriptive treatment. There is no need to tell the reader how many times to repeat these movements, whether during a treatment or over a series of treatments, as the operator should be able to judge this for his or her self. The reader may well interpret this as meaning only a single maneuver is required. Although Dr. Still may well have used a single application in some instances, or at least written it down as such, there is also evidence from his early students, as well as accounts from Dr. Still written toward the end of his life, that he used a more repetitive, articulatory approach.

If the operator is aiming to change the position of a structure, such as the first rib or clavicle, then a singular

movement may well be all that is needed. However, if working to reduce deep-seated, soft-tissue tension around rigid articulations, then a more repetitious movement is required. This is also the case if aiming to free congestion and affect the circulation of vital fluids, whether locally, such as in the axilla, or more generally, as may be the case when choosing to use a lymphatic pump technique. The long leverages employed in Dr. Still's methods, and their repetitive nature, target multiple tissues during treatment—arguably making it more specific, rather than focusing on a single tissue as described in the Still Technique.

The first book on Osteopathy, published before any of Dr. Still's, was *Osteopathy: The New Science of Healing*, written in 1896 by Dr. Elmer D. Barber, an 1895 ASO graduate. Although this book was denounced by the profession at the time, as it encouraged and instructed the lay person in manipulation, it is an important document. The methods pictured and described in it provide accounts directly related to Dr. Still's teaching at the ASO in the very early days. Barber states in his second book, *Osteopathy Complete*, "Immediately after graduation, we moved to Baxter Springs, Kansas, and engaged in the active practice of Osteopathy. It was during this period when, fresh from the school at Kirksville, Missouri, with our pockets bursting with notes gathered eagerly from the lips of the discoverer of Osteopathy, that our small book, *Osteopathy: The New Science of Healing* was written."¹³

The following descriptions are taken from Dr. Barber's first book.¹⁴ These accounts, which, like Dr. Hazard's, may be prone to misinterpretation, seem to suggest that a repetitious rather than a single movement was frequently used.

"With the finger ends close to the spine, pressing quite hard, using the arm as a lever, with a circular motion move the muscles under the hand toward the head...after each upward motion, move the hands down an inch, keeping close to the spine and working deep the entire length of the spinal column." (Figure 1).

"To stretch the sciatic nerve, place the patient on his back, stand at the side of the table, and grasp with the right hand the right ankle, your left hand resting lightly on the patient's knee; now flex the leg slowly against the abdomen as far as is possible, using as much strength as the patient can stand. While in this position, move the knee three or four times from right to left, without relaxing the pressure; now solely extend the leg, throwing the knee to the right, the foot to the left." (Figure 2).

"Place the patient on the face, and, while pressing hard on the sacrum immediately below the small of the back, raise the limbs from the table as high as the patient

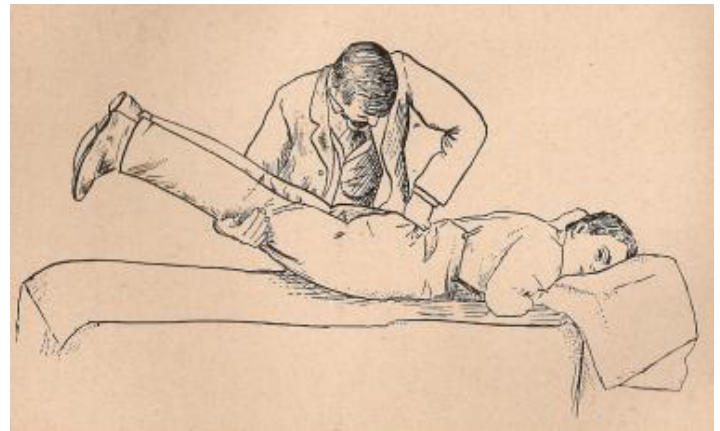



Figure 3: Double-leg leverage¹⁵

Swinging or Suspension Device 

In our next issue a full explanation of the swing and directions how to use it will be given by Dr. A. T. Still.

THIS DEVICE was gotten up by Dr. A. T. Still for the purpose of making work in treatment easier on the Operator, also treatment given in the swing is more effective. It is now used in every room in the infirmary. This device will be sent, express prepaid on receipt of \$1.40. Order from the

JOURNAL OF OSTEOPATHY.

An Instrument for Replacing the Uterus.

The set consists of two instruments, one large and one small size. The price is two dollars a set. The instruments were patented by Dr. A. T. Still. Dr. Harry Still says: "I use them almost daily in my practice." Address orders to Warren Hamilton, Sec'y A. S. O., Kirksville, Mo.

Figure 4: One of Dr. Still's inventions. Advertisement. *The Journal of Osteopathy*. August 1900;7(3):3.



Figure 5: Smith Osteopathic Swing Advertisement. *The Journal of Osteopathy*. October 1903;10(10): 12.

can bear without too much inconvenience, moving them gently from side to side.”

Figure 3 shows the use of the lower extremities as a long, powerful leverage into the pelvis and spine, which can be very taxing on the operator. This may have been why the Old Doctor invented an osteopathic swinging device to ease the strain on the operator. (Figure 4 and Figure 5).

Dr. Guy Dudley Hulett held the post of Assistant in Theory and Practice of Osteopathy at the ASO in the early 1900s. Coming from a family of Osteopaths, he began his osteopathic studies in the fall of 1898. He is reported to have had the special advantage of an “intimate association with the Old Doctor throughout his entire course.”¹⁵ Dr. Hulett therefore appears more than qualified to give us an account of the Old Doctor’s methods, describing procedures that consist of repetitive movements. In particular, he states that, according to Dr. Still, the treatment of sacral and innominate lesions may be simplified to one or two methods designed to make use of the fact that the sacrum has been driven downward between the iliac structures.

He goes on to say that, when a wedge is driven into a log, it can be withdrawn with much greater ease by working it from side to side than by exerting a straight simple traction force. He uses this analogy when referring to treatment of the sacrum that is wedged between the innominate bones. Dr. Hulett then describes a method whereby the patient is seated on a stool and the ischia are held strongly against the seat. The patient is then grasped and lifted with a rotating, side-to-side movement.¹⁶

Now, some may say that these descriptions represent early methods used by Dr. Still, and that he changed and refined his approach as he grew older. This may be the case, but he was still using similar methods later in his life, as can be seen in his last published book, which offers an excellent account of his methods. Below are some of Dr. Still’s own descriptions of his treatment,¹² which again suggest repetitive, articular movements.

“Adjust the inferior maxilla, see that it is not pressing on the ascending carotid artery. When you find that it is, adjust it by placing one hand behind the angle of the jaw, the other on the chin. Ask the patient to open the mouth, then push the chin down, the angle up and forward, with a slight twisting movement crossways, and be sure that the jaw is in its normal position. Be sure that the masseter and buccinator muscles are truly normal. Wrap a handkerchief around your thumb; place it inside the mouth on top of the teeth and gently press down, giving a slight rotary motion right and left.” (Figures 6).

“Have your patient get on his knees on the floor. Let the breast be supported by a stool about fourteen inches high so that it will drop the body downward a little, then, coming up behind the patient, take his thighs between your knees firmly and rotate the patient with your knees with a twisting motion, a little to right and then to the left keeping your hands or thumbs at each vertebra till you have them in perfect articulation from the sacrum to the twelfth dorsal. This twisting, rotating motion loosens all the facets of the lumbar vertebra.” (Figure 7).

“If my patient was in bed, I had him get out and kneel down at the side of it with his chest resting on the edge of



Figures 6: *Inferior maxilla*



Figure 7: Knee-chest position, sacrum, lumbar and 12th dorsal



Figure 8: Door jamb treatment



Figure 8: Hip treatment

the bed. Then I came up behind him, spread out my knees and took his hips between them. Then with my thumbs one on each side of the spinous processes of the lumbar vertebra, I made hard pressure while, with my knees, I gave his body an oscillating motion, my aim being to give his hips a twist with my knees while I moved my thumbs from joint to joint as I twisted. I continued this on up to the twelfth dorsal.”

“If your patient be an adult male or female and sufficiently well to be out of bed, stand him in the doorway with his face and breast against the jamb of the door, then bring a gentle but firm pressure with your knee at the upper part of the sacrum and, with your hands on both his shoulders, pull his body back far enough to bring a gentle pressure over your knee, then swing him from right to left a few times, so as to thoroughly loosen up the lumbar region.” (Figure 8).

...“When the patient is a man, I generally treat him in the lumbar region while he is standing up, placing him with his face and breast against the jamb of a door. I set my knee on the upper part of the sacrum, hold that firmly, then place my hands on his shoulders. I draw him backwards, then make a few moves to the right and the left in order to adjust the sacrum to its normal articulation and take the pressure off the renal system.” (Figure 8).

“...patient lying on the table on his back with the legs spread out. I sit on the edge of the table with my thigh well up in his crotch. I then take hold of the patient’s leg, and with a slight twisting motion, I draw the thigh down towards the socket and hold it with my fingers while I flex the patient’s knee and bring it in an easy position to get my breast against it. Then I bear down with my breast and rotate the leg outward and inward a few times, then I straighten the leg out across my thigh and twist the foot a little.” (Figure 9).

It can be seen that Dr. Still mostly favored the limbs and spine as long leverages, which were moved around a fulcrum or fixed point. This fixed point may have been anything from a hand, finger, knee, door jamb, post or tree. In addition, Dr. Still also applied subtle amounts of compression or traction toward the sensing fulcrum. The advantages of using a long lever are that it is very powerful and brings into play all tissues, with emphasis where needed. It also appeals to the mechanical equilibrium and integration of the body and, when used correctly, is perfectly safe.

Dr. John Martin Littlejohn recalls that a jerking motion was the continued accompaniment of Dr. Still’s rotating, flexing and extending movements.¹⁷ Dr. Littlejohn also describes this jerking as a quick tissue tug. According to modern researchers,^{18,19,20,21} this fast movement may well

produce an after effect or alteration in sensory discharge from Ia afferents. This occurs by changing the mechanical character of the muscle spindle receptors, which has been claimed to lead to a reflex inhibition of motor neurons. If this is the case, then Dr. Still may have known this intuitively.

This rapid movement toward the end of a manipulation may also go some way into explaining Dr. Still's "Lightning Bonesetter" title. However, it may also be the case that the word "lightning" has nothing to do with speed, but was used in reference to affecting the flow of energy or electromagnetic forces through the body—a concept that the one-time magnetic healer would have been well aware of.⁸

This short article touches on just some of my own observations. It is by no means definitive, and merely aims to add to the good work done by others. I have purposely not discussed diagnosis, as this is something the Osteopath should know how to do, as Dr. Still would say. It is vital, though, that a thorough examination and diagnosis is made, as to give treatment without either will usually result in failure or overlooking some vital piece of information.

All of the above, as well as other Still methods, I have been teaching and sharing with the international osteopathic profession for some years now. Of course, my own understanding of all these accounts may well be misinterpreted. Whatever Dr. Still did to his patients, it appears that he used a variety and combination of methods rather than just one technique. If you are interested, then I would certainly recommend revisiting the Old Doctor's published books and other writings. However, do not just read them—have fun studying them, for they will yield many precious gems.

We will probably never know exactly what Dr. Still did, and this is no doubt just how he would have wanted it. In time, further accounts of his manipulative approach may well surface, which will add to the information already gathered and bring us ever closer to the Old Doctor and his methods. In the meantime, we should continue to challenge ourselves as practitioners—not by imitating, but by researching, practicing and developing our own individual methods of treatment, while adhering to, and not straying from, the philosophy and principles that were laid down by our founder and discoverer all those years ago.

References

1. Booth ER. *History of Osteopathy and Twentieth-Century Medical Practice*. Memorial Edition. Cincinnati: The Caxton Press; 1924.
2. Chappell G. Unadulterated Osteopathy. *The Journal of Osteopathy*. March 1903;104-105.
3. Haxton J. Prefaces. In: Hartmann C. *An Illustrated Practice of Osteopathy –1908*. Germany: Jolandos; 2005.
4. Hildreth AG. *The Lengthening Shadow of Dr. Andrew Taylor Still*.

5. Kirksville, MO: The Journal Printing Company; 1938.
5. Edwards FO. What Specific Treatment Is. *The Osteopathic Physician*. June 1924;22.
6. Andrew Taylor Still Collection. Missouri Digital Heritage Web site. <http://cdm.sos.mo.gov/cdm4/browse.php?CISOROOT=/atsu>. Accessed October 10, 2010.
7. Jackson PA. The Technique of A.T. Still. In: Wernham J. *Classical Osteopathy*. Maidstone, Kent: The John Wernham College of Classical Osteopathy; 1996.
8. Trowbridge C. *Andrew Taylor Still*. Kirksville, MO: The Thomas Jefferson University Press; 1991.
9. Still CE. Reminiscences. *The Journal of Osteopathy*. September 1901;309-311.
10. Van Buskirk RL. *The Still Technique Manual: Applications of a Rediscovered Technique of Andrew Taylor Still*. 2nd ed. Indianapolis: American Academy of Osteopathy; 2006.
11. Hazzard C. *The Practice and Applied Therapeutics of Osteopathy*. 3rd revised ed. Kirksville, MO: The Journal Printing Company; 1905.
13. Still AT. *Osteopathy: Research and Practice*. Kirksville, MO: Published by the author; 1910.
14. Barber ED. *Osteopathy Complete*. Kansas City: Hudson-Kimberly Publishing Co.; 1898.
15. Barber ED. *Osteopathy: The New Science of Healing*. Kansas City: Hudson-Kimberly Publishing Co.; 1896.
16. Faculty of American School of Osteopathy Session of 1900-1901, (Anon., 1900), *The Journal of Osteopathy*. August 1900;7(3):126.
17. Hulett GD. *A Textbook of the Principles of Osteopathy*. 3rd ed. Kirksville, MO: The Journal Printing Company; 1905.
18. Littlejohn JM. *Principles of Osteopathy*. Published by the author; 1907.
19. Herzog W, Scheele D, Conway P. (1999). Electromyographic responses of back and limb muscles associated with spinal manipulative therapy. *Spine*. 1999;24(2):146-152.
20. Dishman J, Bulbulian R. Spinal reflex attenuation associated with spinal manipulation. *Spine*. 2000;25(19):2519-2525.
21. Dishman J, Burke J. Spinal reflex excitability changes after cervical and lumbar spinal manipulation: A comparative study. *The Spine Journal*. 2003;3(3):204-212.
22. Dishman J, Dougherty P, Burke J. Evaluation of the effect of postural perturbation on motoneuronal activity following various methods of lumbar spinal manipulation. *The Spine Journal*. 2005;5(6):650-659.

Acknowledgements

As always, my special thanks to Jason Haxton, Director of the Museum of Osteopathic MedicineSM and all the friendly, helpful staff.

Accepted for Publication: August 2011

Address correspondence to:

Jamie Archer, DO (UK)
10 Holmgate Road, Clay Cross,
Chesterfield, Derbyshire,
S45 9PH, UK
jamie.archer@btconnect.com



Help us do a world of good ...

Des Moines University is a special place! In existence for more than 100 years, Des Moines University has a singular mission to develop distinctive health care professionals.

An integral part of Des Moines University, the **Osteopathic Manual Medicine (OMM)** department has a long history of excellence and Des Moines University has dedicated the necessary resources to maintaining that excellence: some of the best clinicians available; a laboratory facility that provides an optimal learning environment; elective course work and supervised engagement with patient care and more!

All this to prepare our graduates to seamlessly integrate osteopathic principles into their practices!

Interested candidates required to submit a cover letter with CV and contact information for three professional references using the online system located at www.dmu.edu/employment. CVs without cover letters will not be considered.

Address cover letter to: Dr. Klock.

CV review and/or interview scheduling will commence immediately and continue until the position is filled.

For complete job description, faculty fulltime benefit summary or more information on the OMM department, please visit www.dmu.edu.

Des Moines University-AA/EOE

Clinical Faculty Position, Osteopathic Manual Medicine

Currently, the OMM Department invites qualified candidates to apply for the position of Clinical Faculty OMM. Duties will include, but are not limited to the following:

- Patient care w/ some academic endeavors.
- Preceptor for 3rd and 4th year Des Moines University students.
- Teaching/supervising OMM didactics and labs.
- Performing student services activities.
- Conducting clinical peer reviews

Requirements for this clinical OMM position include but are not limited to:

- Earned D.O. from an AOA accredited college of osteopathic medicine.
- Board eligible status or board certification in OMM/NMM and/or PM&R.
- Three years of prior academic teaching experience preferred.
- Three years practice in clinical medicine preferred.
- Be a member in good standing in all appropriate professional and governmental organizations.
- Unblemished professional record for clinical skills/practice and ethical conduct.


DES MOINES UNIVERSITY

An equal opportunity employer.

**3200 Grand Avenue
Des Moines, IA 50312
www.dmu.edu
515-271-1400 or 800-240-2767**

What is health? What is disease?

Thoughts on a complex issue

Matthias Flatscher, PhD (Austria); Torsten Liem, DO (Germany)

Although health is the greatest of all goods relating to the body, it is nevertheless the one that we consider and enjoy least: when we have health, we do not think of it.¹

Difficulties regarding method: The hiddenness of health

This subject affects us all, and is not only a concern of health professionals. Nevertheless, health is usually something that is hidden, only coming to the fore when it is not a “given.” When we are sick, the loss of health is evident. But what is health? Is it simply the absence of disease?

The question, “What is disease?” seems easier to answer than the question, “What is health?” Disease manifests itself as disorder and announces its presence in the form of symptoms. Disease phenomena, cases of disease, the clinical picture and course of a disease can all be described, objectified and classified. Can the same be said of health? We face problems if we simply see each as the reverse of the other – disease as the negative counterpart of health, its opposite – and it hardly helps us arrive at a positive definition.

The 1948 World Health Organization definition of health

The World Health Organization (WHO) defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”²

The following aspects of this definition are very helpful:

- Health goes beyond physical considerations.
- Health is viewed in its psycho-somatic entirety.
- Health is not limited to the person as an individual, but is also expressed in the person’s relationship with the surrounding world.
- Health is more than the absence of disease.
- Health is understood in terms of (subjectively-experienced) well-being.

The following aspects of this definition, however, present problems:

- Health is described as an ideal, static state (how many people can claim to enjoy *complete* physical, mental/spiritual and social well-being?).

- Health is equated with the highest good, but in doing so the definition fails to present it as a means of enabling a successful personal life plan (it follows, surely, that the entire responsibility for a person’s life plan would then become the concern of healthcare, instead of the person’s own?).

Definition of health as given in the *Lexikon für Ethik*

In the *Lexikon für Ethik*, the entry for “health” revealingly refers the user to that for “disease,” and the WHO definition is criticized as idealistic and subjective. “A helpful middle course seems to be, on the one hand, to interpret disease as functional disorder, i.e., the disturbance of a functional balance, and on the other hand, to let the criterion by which we define disease be not the failure to achieve the ideal state, but rather the deviation from statistical normal values.”³ According to this definition, disease is understood as functional disturbance and health as functional efficiency. The understanding of health is thus derived from disease – to be more exact, it is seen as the absence of disease. The achievement of health is interpreted as the removal of these functional disturbances. The measurement of (dys) functionality is based on statistically-determined, controlled variables, and health is consequently understood as a biologically-programmed set point.

The functional concept of disease and health is a descriptive one. Statistical, scientific analysis can identify a deviation from mean values, but is quite incapable of identifying states of health or disease. Physical, chemical or biological data are inadequate as prerequisites for understanding disease. This approach describes facts, but cannot say what should be the norm. It is a (naturalistic) mistake to proceed from statements of fact to normative statements of what ought to be. “Ought” does not follow from “is.” Descriptive medicine finds itself in a “normative vacuum.”⁴

Health is what is “normal,” but not in the sense of the statistical mean. If (almost) all are blind, that is, not normal (take as an example of this idea Saramago’s *Blindness*⁵),

there is nothing normative in a statistical statement of fact. It is precipitous to equate the “mean” with the “standard,” and should be avoided.

A functional understanding of disease leads to the practice of medicine as repair. Repair medicine assumes a statistical mean value that has to be restored. The achievement of health is understood simply as a matter of restitution, in the sense of establishing the old order of set values. In contrast to this, Liem, for example, writing in the context of osteopathy, put forward a resource concept in which healing is not necessarily oriented toward a previous state of health, but is based on a concept of health as an evolutionary process, and embraces a higher-order dynamic balance of the person as a whole.⁶

Disease and health link back to the psycho-somatic well-being of a particular individual. This must definitively involve reference to the individual biography (history of disease and attainment of health) and the socio-cultural context of the individual.⁶

An attempt at a fresh definition of disease and health

There is a difference between disease and being ill. Being ill is not something that can be reduced to the clinical picture of the disease or to the somatic dysfunction/lesion. The functional, scientific perspective forgets that diseases link back to the individual experience of *being ill*. Diseases cannot be separated from the person who is ill. How far, we may ask, does Osteopathy, as a system of manipulative treatment, take into account these perspectives in its historic course of development, other than in terms of metaphysical speculation?⁷

The WHO took up the problem of a static concept of health as against the dynamic and process-based one, and formulated a blueprint for health policy in its Ottawa Charter. This is underlain by certain “resource” prerequisites for the promotion of health.⁸ The Ottawa Charter represents an integration model, in terms of both content and method, the aim of which is to apply and develop various strategies to inform, educate, train and advise on matters of health, encourage self-help and promote preventative medicine. According to Hörmann, the main influencing factors on the maintenance and restoration of health are lifestyle and the treatment of disease.⁹ The spiritual dimension of health should also, according to Raitchel, et al., be taken into greater account.⁸

Antonovsky’s *Salutogenese* takes a similar direction by investigating the means by which individuals develop toward health and help to unlock the resources of healthy capacities.¹⁰ Common to both *Salutogenese* and the Ottawa Charter are the aim of enabling healthy development,

the centrality of prevention and health promotion, and addressing several context dimensions (system levels).¹¹ Whereas Antonovsky’s concept of health genesis inquires about options for healthy development, gives a central place to self regulation in treatment and adopts a dynamic understanding that views sickness and health as a continuum, pathogenesis asks about the causes of disease, applies analytical approaches and objective findings, and combats disease based on a dichotomy between health and sickness.¹¹ Many approaches of complementary and alternative medicine, as well as approaches within Osteopathy, correspond to “Salutogenic” views, for example, seeing health and disease as a continuum and the view that disease can, to some extent, also be seen as part of physiology, or in the much-quoted words of A.T. Still, “To find health should be the object of the doctor. Anyone can find disease.”¹²

On the one hand, Osteopathy does show signs typical of the Salutogenic approach. On the other, the interpretation of human and interpersonal phenomena in exclusive terms of anatomical and physiological processes – which often characterize actual, current osteopathic methods – risks the reduction of the person, especially when inner experiences are disregarded, to the energetic or physical level. We can, of course, regard structural and physiological dynamics as a precondition, but not as an adequate cause of human phenomena.⁶ If we wish to treat the *wholeness* of the patient, it does not suffice to treat only what is represented in the tissue.

It is also not uncommon to find in practice that patients take the approach of simply handing over their bodies for treatment to the osteopath, as they might hand over a car to a garage for repair. An osteopath who unquestioningly accepts this role misses the opportunity of enabling the patient to make a conscious decision to participate actively in the healing process. This also increases the likelihood that the patient will suppress psychological associations.¹³ A further problem is that the language in which a great proportion of osteopathic approaches are expressed is bio-reductionist. These last two points make it difficult for patients to recognize the connections between the circumstances of life, their own experience and behavior on the one hand, and the associated dysfunctions and disturbances of their state of health on the other, enabling them to take personal responsibility for their physical and psychological state of health.

Further, in Osteopathy there is an almost complete lack of methods that could provide a basis to promote the development of subjective experience in the practitioner (or, indeed, the patient), apart from techniques to

experience the tissue by palpation, taught in osteopathic training. Osteopaths are therefore usually little prepared to consider subjective realms of experience in their patients (or, indeed, in themselves).¹⁴ In this respect, phenomenology teaches that it is especially the act of dealing with the space-time character of existence—and dealing with the physicality of existence, co-existence in a common world, attunement of mood, memory and existence in history, mortality, openness of existence and, beyond this, the unfolding of these supporting possibilities—that lead to freedom of existence.¹⁵

The medical finding should be understood from the experience of being ill, and not the other way around. To be ill means to have a disturbed relationship with Oneself, one's fellow beings and environment. Applied to osteopathy, this means that, against the objective reality of the tissue structures and associated energies, there stands the subjective reality of inner consciousness or subjective experience (both that of the patient and that of the practitioner). This is embedded in inter-objective realities (sociobiological environment) and inter-subjective ones (culture/family).⁶

It is sick *people* rather than diseases that are healed—persons in their psycho-somatic-social wholeness. The dimension of experience of the sick person who complains of symptoms cannot be straightforwardly equated with the objective level. What is meant by the achievement of health (in terms of the healing process) is not determined from the outside (i.e., by the use of statistical mean values), but from the direction of patients themselves. Standard values cannot establish what it is to be healthy, nor can this be measured technologically. Rather than this, health appears to be a state of “inner adequacy and agreement with oneself.”¹⁶

Sick patients each bring with them an individual history, bound up with their particular biography and relationship with the world and people around them. The aim of therapy cannot be to bring about a statistical mean value, but to find a fresh balance, matched to the individual. Being ill is not something that can be reduced to a biological, social or psychological dimension—it must take into account all related concerns in their entirety, from the point of view of the patients.

Achieving health does not, therefore, mean a return to a pristine biological state. Rather, what is past is treated as something that has indeed existed and whose consequences in the present and future must always be taken into consideration. Therapeutic methods, therefore, must be innovative and not just restitutive. There is no preset “what” or universal “how” in being healthy. “Not everything is equally healthy for every individual. There

are no definitions of being healthy or being ill that apply infallibly to every single case.”¹⁷ Being ill and being healthy link back to the particular person's individual experience. Since medicine has been viewed from more than just the scientific point of view, and has been seen as the art of healing. This art lies in the ability to appreciate the suffering and specific characteristics of the individual person. In sickness, the requirement inherent in this specific individual experience is this: Change is required when individual suffering needs to be alleviated. Taking this normative and practical view of the particular individual and that person's life experience as a starting point, we can then look at socio-cultural, descriptive scientific aspects. Osteopathy, therefore, must recognize individuals as they are, and it is in this sense that it offers the potential to act, to give treatment. Examples of possible approaches can be found in *Morphodynamik in der Osteopathie*.⁶

Being healthy is the essential capacity to be open towards oneself and others, and to enter into communication. Healthy individuals are neither at the mercy of what they encounter, nor are they slaves to it (as in addiction or compulsion), nor do they shut themselves off from their own selves or others. Being healthy is the fundamental experience of the person's own ability to be: “Hidden as it is, health becomes apparent in a kind of well-being; more than this, this very sense of well-being makes us eager to be active, open to discover, and forgetful of self, so that we hardly even notice stresses and strains...”¹⁶ In the process of achieving health, according to Liem, an increase in health finds expression in increasing

CME QUIZ

The purpose of the quiz on page 31 is to provide a convenient means of self-assessment for your reading of the scientific content in “What is health? What is disease? Thoughts on a complex issue” by Matthias Flatscher, PhD (Austria) and Torsten Liem, DO (Germany).

To apply for Category 2-B CME credit, answer each question on the *AAOJ* CME quiz application form answer sheet. The AAO will record the fact that you submitted the form and will forward your test results to the AOA Division of CME for documentation.

You must have 70 percent of the answers correct in order to receive CME credit. The correct answers will be published in the March 2012 issue of the *The AAO Journal*.

coherence—for example, in increasing understanding for the meaningfulness of the entire world in which the person lives. Individuals grow in understanding for their life history as a whole, including their state of health, suffering and associations of meaning, and there is an increase in trust.¹⁸

Summary and conclusion

Health, unlike disease, is hard to put into objective terms. Attempts at a definition rest on certain reductionist ideas (health cannot be defined as an ideal state). Health/disease cannot be understood simply from a functional perspective or by objectifiable values. A norm cannot be derived from a description (false reasoning on naturalist premises). The achievement of health does not rest upon restorative methodology (repair medicine). Health/disease should be seen from the perspective of the individual's experience. The determining factor in the achievement of health is not by way of objective mean values but patients' inner agreement, with consideration being given to the individual, along with their personal history and the contexts surrounding that individual.

Normative requirements can only be arrived at when working from a perspective that relates to experience, and these norms are always individual. Medicine and Osteopathy, as healing arts, must conform to this individuality. To be ill is to have a disturbed relationship with one's self, one's fellow beings and the surrounding world. To be healthy is the essential capacity to be open to self and others, and to enter into communicative exchange.

References

- Descartes R. Brief an Chanut vom 31. März 1649. In: Canguilhem G. *Health – eine Frage der Philosophie*. Berlin: Merve; 2004.
- Constitution of the World Health Organization. <http://www.admin.ch/ch/d/sr/i8/0.810.1.de.pdf>
- Horn C. Krankheit. In: Höffe O, ed. *Lexikon der Ethik*. Munich; 2002.
- Waldenfels B. Der Kranke als Fremder. In: *Grenzen der Normalisierung*. Frankfurt am Main: Suhrkamp; 1998.
- Saramago J. *Blindness*. London: Harvill Press; 1997.
- Liem T, ed. *Morphodynamik in der Osteopathie*. Stuttgart: Hippokrates Verlag; 2006.
- Gevitz N. *The DOs: Osteopathic Medicine in America*. Baltimore: The Johns Hopkins University Press; 2004.
- Raithel J, Dollinger B, Hörmann G. Gesundheitspädagogik. In: *Einführung Pädagogik*. Wiesbaden; 2004:232-249.
- Hörmann G. Die Krise des Gesundheitssystems: eine verkannte Bildungskrise. In: *Bildung*. 2002; 1(1):24-30.
- Antonovsky A. *Salutogenese Zur Entmystifizierung der Health*. Tübingen: dgvt-Verlag; 1997.
- Petzold TD. Salutogenese und 20 Jahre Ottawa-Charta. In: *Gesundheit Berlin. Dokumentation 12. bundesweiter Kongress Armut und Health*. www.gesundheitberlin.de
- Still AT. *The Philosophy and Mechanical Principles of Osteopathy*. Kansas City, MO: Hudson-Kimberly Publishing Co.; 1902:58.
- Nathan B. *Touch and emotion in manual therapy*. New York: Churchill Livingstone; 1999.
- Liem T. Osteopathy and (hatha) yoga. *Journal of Bodywork & Movement Therapies*. 2011;15(1):92-102.
- Boss M. *Grundriss der Medizin und Psychologie*, 3rd ed. Bern: Verlag Hans Huber; 1999.
- Gadamer HG. *Über die Verborgenheit der Health*. Frankfurt am Main: Suhrkamp; 1993.
- Pöltner G. *Grundkurs Medizin-Ethik*. Vienna: Facultas Universitätsverlag; 2002.
- Liem T. Wechselseitige Beziehungsdynamiken und subjektive Ansätze in der Osteopathie. *Osteopathische Medizin*. 2011;12(2):4.

Accepted for publication: September 2011

Address correspondence to:
Matthias Flatscher, PhD (Austria)
Torsten Liem, DO (Germany)
tliem@torstenliem.de

Sutherland Cranial Teaching Foundation Upcoming Courses



SCTF Basic Course:

Osteopathy in the Cranial Field

May 31–June 4, 2012
Chicago College of Osteopathic Medicine
Chicago, Illinois
Course Director: Dan Moore, DO

SCTF Continuing Studies Course:

The Pelvis

October 12–14, 2012
University of New England
College of Osteopathic Medicine
Biddeford, Maine
Course Director: Andrew M. Goldman, DO

Visit our website for enrollment

forms and course details: www.sctf.com

Contact: Joy Cunningham 509-469-1520

Email: jcunningham4715@yahoo.com

AMERICAN OSTEOPATHIC ASSOCIATION CONTINUING MEDICAL EDUCATION

This CME Certification of Home Study Form is intended to document individual review of articles in the *American Academy of Osteopathy Journal* under the criteria described for Category 2-B CME credit.

CME CERTIFICATION OF HOME STUDY FORM

This is to certify that I, _____
Please print name

READ the following article for AOA CME credits.

Name of Article: What is health? What is disease?
Thoughts on a complex issue?

Author(s): Matthias Flatscher, PhD (Austria); Torsten Liem, DO (Germany)

Publication: *The AAO Journal*, Volume 21, No. 4,
December 2011, pp. 27-30.

Complete the quiz to the right by circling the correct answer. Mail your completed answer sheet to the AAO, which will forward your results to the AOA. You must have 70 percent of the answers correct in order to receive CME credit.

Mail this page to:
American Academy of Osteopathy
3500 DePauw Blvd,
Suite 1080
Indianapolis, IN 46268

Category 2-B credit may be granted for these articles.

00 _____
AOA Number

Full name: _____
(Please print)

Street address: _____

City, state, zip: _____

Signature: _____

FOR OFFICE USE ONLY

Category: 2-B Credits: _____ Date: _____

1. According to the authors, which of the following is true?
 - A. Health can be understood simply from a functional perspective.
 - B. Health can be understood simply by objectifiable values.
 - C. Health is easy to put into objective terms.
 - D. Health should be seen from the perspective of the individual.
2. The 1948 WHO definition of health is “the absence of disease or infirmity.”
 - A. True
 - B. False
3. According to the authors, which of the following is true regarding Osteopathy?
 - A. In Osteopathy, there is only the objective reality of tissue structure changes.
 - B. It is uncommon in osteopathic practice to find that patients hand over their bodies to the osteopath as someone would hand over a car to a mechanic.
 - C. Osteopaths are well prepared to consider subjective realms of experience in their patients.
 - D. There is almost a complete lack of methods that could provide a basis to promote the development of subjective experience in the osteopath.
4. According to the authors, Osteopathy has to give recognition to patients as they are in order to provide treatment
 - A. True
 - B. False

September 2011 *AAO Journal* CME quiz answers:

1. A
2. B
3. B
4. A

Answers to December 2011 *AAOJ* CME quiz will appear in the March 2012 issue.

OMT and exercises for a patient with limited knee range of motion prior to knee replacement: A case report

Robert C. Clark, DO, MS

The patient:

A 64-year-old physical trainer was seen in consultation with his personal trainer. The gentleman is extremely fit, but has severe degeneration of his right knee cartilage. His orthopedic surgeon informs him that imaging shows no remaining cartilage. He has had repeated treatments with Synvisc® and is now preparing for knee replacement surgery. Over-the-counter, non-steroidal, anti-inflammatory drugs are used as needed to control pain. He seeks advice on how to prepare for the surgery and obtain improved range of motion in his quadriceps and hamstring muscles to facilitate his rehabilitation and recovery.

Findings:

The patient walks with a limp on his right knee. He cannot fully straighten the right knee, whether standing, sitting or supine. The hamstring tendons are visibly tense and stand out from the muscle mass of his lower extremity.

His resting position was 15 to 20 degrees of knee flexion when supine. He can flex the knee to 90 degrees. Hip flexion was about 95 to 100 degrees (with knee flexed). There was no internal or external rotation and no abduction of the knee (varus/valgus). The right fibular head was posterior with nearly no range of motion. Ankle inversion and eversion were restricted as well.

The trainer seeking consultation had tried Proprioceptive Neuromuscular Facilitation, which is a derivative of Muscle Energy Technique, with no results. He and the patient believed that active work on the hamstring and quadriceps muscles was a desirable goal. They sought ideas for working on these muscles.

The treatment:

To work the target muscles, we tried an alternative strategy. Since each muscle has two attachments, my idea was to focus on the hip end of the hamstring muscles rather than the knee attachments. To do this, we had the patient flex his hip to 60 degrees and flex his knee to about 60 degrees as well. His thigh and calf were held in this position while he exerted muscle energy forces to both straighten his hip and flex his knee against the doctor's resistance. Due to his strength, we used a very small force

and resistance but increased the duration of the isometric contraction to 20 to 30 seconds. In the rest phase, we increased the hip flexion and knee extension. Figure 1 shows the basic patient position and the directions of the patient's forces.

For the next several steps of the treatment, the right knee was supported on a pillow (alternatively the doctor may place his or her flexed knee under the patient's knee) while the patient was supine.

The posterior fibular head was treated using the ankle and foot as an articular lever by rocking back and forth between ankle inversion and eversion until the fibular head mobilized (Figure 2).

Figure 3 shows the third step of treatment, which was to improve internal and external rotation of the knee. Again, gentle articular treatment was used. The distal femur was held with the doctor's left hand, and his right hand used the foot and ankle as a lever to alternate between internal and external rotation.

To improve abduction, the knee and ankle were pushed in opposite directions toward the restrictive barrier, and a gentle, vibratory force was applied until some softening was felt. The same strategy was used to improve adduction.

Results of treatment:

After the treatment, the patient had passive internal and external rotation of his knee when he previously had none. His knee extension was increased by five to 10 degrees to a resting position of 10 to 15 degrees of flexion. Previously, neither his trainer colleagues nor physical therapists had obtained any discernable increase in range of motion of knee extension.



Figure 1



Figure 2



Figure 3

Self treatment:

The final step of the treatment plan was to devise a means of self treatment. The hamstring/quadriceps treatment could be replicated using a towel around either the foot or the calf. The patient would hold the towel and exert a muscle energy force. He could easily do this technique supine. The internal/external rotation self treatment could be replicated with the patient sitting on an exercise ball. Using the heel as a pivot, he would move the foot to toe-in and toe-out to give the internal and external rotation effect in the knee. In the same position, he could invert and evert the foot and ankle to give valgus/varus- or adduction/abduction-type movements in the knee, as well as keep mobility of the proximal fibula.

Follow-up:

The patient was seen in the gym two weeks after the initial visit. He continues to work with his clients. He also continues to have sessions with his personal trainer, as well as do the recommended exercises. Range of motion had visibly improved and the knee is straighter. Surgery is anticipated in the next two months.

Discussion:

When I was a student, one of my mentors, William Wyatt, DO, taught me to think of a muscle as akin to a clothesline. If one end is tight, so is the other. From that conceptual basis, an extrapolation can be made that, if one end cannot be stretched since the joint is nearly immobile, then the other end can be used to stretch the muscle. It makes little difference which end is used if there is good positioning and proper force to work the desired muscle.

Another principle of knee joints is to *never* neglect the minor motions. Over the years, many of my mentors have given this advice, and I have observed it to be true many times in my practice. For these minor motions, articulatory technique is a very effective choice. It can be administered in many patients. The force should start as gentle rocking and, as the tissues respond, the force and range can be

gradually increased as needed to obtain joint motion. The last principle is to not waste a patient's time using techniques that others have used without results.

This patient shows the value of each of these principles.

Alternative treatment technique:

The patient is in the same position with both his hip and knee flexed to 60 degrees. The muscle energy force of the patient is to straighten both his hip and his knee against resistance. It is most easily done in two steps. First, the patient starts by attempting to straighten the knee (Arrow 1). Then, while continuing that effort, the patient applies a second muscular effort of straightening the hip (Arrow 2) by attempting to bring the entire lower limb toward the table. Figure 4 shows the directions of the patient's muscular efforts.

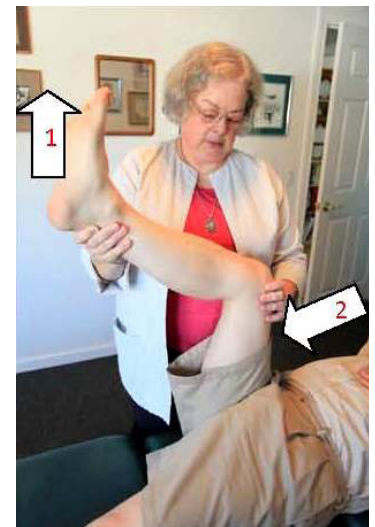


Figure 4

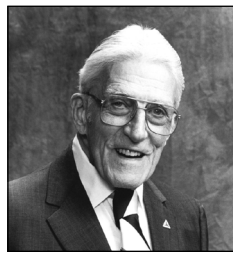
Again, due to the strength of the lower limb muscles, use a very small force and resistance with an increase of the isometric contraction duration to at least 20 to 30 seconds. In the rest phase, the doctor gently increases the hip flexion and knee extension. In this patient, it would be impossible to achieve a straight leg. This technique strategy is very useful in getting substantial lengthening of tight hamstring muscles for any patient.

Accepted for publication: October 2011

Address correspondence to:
Robert C. Clark, DO, MS
osteopathywithdrbob@gmail.com

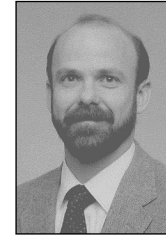


Rajiv L. Yadava, DO
Program Chair



Dr. Robert C. Fulford's Basic Percussion Course

April 20-22, 2012 at TCOM



Richard Koss, DO
Faculty

Course Description and Background:

At Dr. Fulford's last course in May of 1997, he expressed his desire to leave his ailing body after his scheduled presentation to the Cranial Academy in June. After demonstrating what he was going to present to the Cranial Academy, he asked Dr. Koss and Dr. Yadava to continue teaching his work to the Osteopathic profession. Dr. Fulford passed away four days after the Cranial Academy presentation.

This course has been restructured to provide the participant a more complete understanding and experience of Dr. Fulford's contributions to Osteopathy. Although hand and percussion techniques are included, the emphasis will be on increasing the clarity of one's working knowledge. Based on the participant's inclinations, there is freedom within the curriculum to change the direction of what information is relayed. Time needed to assimilate what is taught will also be respected.

Prerequisites:

This Level III course is for DOs, MDs, dentists and students with a 40-hour approved Cranial course and/or prior training and experience in Cranial Osteopathy or permission from the program chair.

Course Objectives:

- One will recognize that many of Dr. Fulford's ideas are rooted in Dr. Still's and Dr. Sutherland's teachings;
- One will begin to see that the results realized from the use of the percussor is directly dependent on the Osteopath's understanding;
- One will see that the use of the percussor will save the physician time and energy; and
- One will appreciate that Dr. Fulford gave more to Osteopathy than a new technique.

CME:

21 hours of AOA Category 1-A credit is anticipated

Course Location:

Texas College of Osteopathic Medicine
3500 Camp Bowie Blvd.
Fort Worth, TX 76107
(817) 735-2000

Travel Arrangements:

Call Tina Callahan of Globally Yours Travel at (800) 274-5975

Registration Form

Dr. Robert Fulford's Basic Percussion Course April 20 - 22, 2012

Name: _____ AOA#: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

Billing address (if different than above): _____

Click here to view the [AAO's Cancellation and Refund Policy](#)

*Registration Rates

On or before 3/20/2012 After 3/20/2012

AAO member \$ 714.00 \$ 814.00

Non-member \$ 814.00 \$ 914.00

*Please see above pre-requisites before registering for this course.

The AAO accepts check, Visa, Mastercard or Discover payments in U.S. dollars

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy to charge the above credit card for the full course registration amount.

Signature: _____

American Academy of Osteopathy
3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268
Phone: (317) 879-1881 • Fax: (317) 879-0563
Register online at www.academyofosteopathy.org

Sacroiliac joint sparing in a patient with ankylosing spondylitis – An osteopathic approach

Joy Ishii, OMS III; Walter C. Ehrenfeuchter, DO, FAAO; Kristie M. Olds, OMS IV, UTF; Murray R. Berkowitz, DO, MA, MS, MPH

Abstract

Ankylosing spondylitis (AS) causes painful inflammation and eventual ossification of the axial skeleton. The pathology of AS typically begins with enthesopathy—painful inflammation at the attachment site of ligaments and tendons to bone—and is gradually replaced with diastrophic calcification. Patients with untreated AS may eventually develop a “stooped” posture due to increased thoracic kyphosis and flattening of the lumbar lordosis, and it can ultimately result in spine immobility and decreased chest expansion. In addition to medication and surgery, physical therapy and regular exercise are important in managing AS, with the aim of encouraging spinal mobility, chest expansion, deep breathing, erect posture and a healthy fitness level. Similarly, certain types of Osteopathic Manipulative Treatment (OMT) can help achieve these goals, and thus, may play more of an integral role in AS management than for which it is generally given credit. Despite the lack of studies specifically for OMT in AS, the current literature concerning the benefit of exercise, stretching and physical therapy can be used to predict the efficacy of osteopathic manipulation in AS patients. While forceful, direct techniques, like high velocity-low amplitude (HVLA) and certain articular methods should be avoided in AS patients, indirect muscle energy, counterstrain, spray and stretch, rib raising and soft tissue may prove to be rather effective.

Introduction and epidemiology

Ankylosing spondylitis (AS), which literally means “inflamed spine growing together,” causes painful inflammation and eventual ossification of the axial skeleton.¹ It is the most common of the spondyloarthropathies—a group of autoimmune chronic inflammatory disorders related by the human leukocyte antigen class-I gene or HLA-B27. Approximately 95 percent of patients with AS carry the HLA-B27 gene.² The worldwide prevalence of AS is 0.1 to two percent, depending on the presence of HLA-B27 in the population.¹ The prevalence of HLA-B27 increases with distance from the equator and is more common in whites than nonwhites. However, not all HLA-B27 positive patients will acquire AS—only one to two percent of all gene carriers are

affected, and 15 to 20 percent of carriers with a first-degree relative with AS are affected.¹ This is due to the belief that environmental factors, such as bacterial infection from *Klebsiella pneumoniae*, is required to trigger the actual onset of AS in HLA-B27 carriers.¹ Other than the role of genetics, the cause of AS is still largely unknown.³

The onset of AS is largely seen in patients under 35 years of age, with a range from 20 to 40 years old.⁴ Men are three times more likely to be affected by the disease.³ Early symptoms include intermittent low back pain that is worse at night or with inactivity, discomfort that may awaken the patient from sleep and early morning back stiffness.³ Inflammation of the sacroiliac (SI) joints may be seen as one of the earliest imaging signs of AS and is considered a hallmark of the disease.¹ The disease generally progresses from the SI joints to ascending regions of the spine, and in some cases to peripheral parts of the body. The pathology of AS typically begins with enthesopathy—painful inflammation at the attachment site of ligaments and tendons to bone—and is gradually replaced with diastrophic calcification.⁵ As the entheses and annulus fibrosis calcify, the spine becomes fused and rigid, resulting in the characteristic “bamboo spine” appearance on x-ray.⁴ Patients with untreated AS may eventually develop a “stooped” posture due to increased thoracic kyphosis and flattening of the lumbar lordosis, and it can ultimately result in spine immobility and decreased chest expansion.¹

The management options for AS include pharmaceutical intervention, surgery, physical therapy and, arguably, OMT. Physicians may prescribe non-steroidal, anti-inflammatory drugs (NSAIDs) for anti-inflammation and symptomatic relief, corticosteroids for anti-inflammation and immune suppression, and TNF- α antagonists such as etanercept, adalimumab and infliximab to block inflammatory protein activation. Sulfasalazine, methotrexate, and anakinra are other common medications used in AS. Due to the increased risk for developing osteoporosis, AS patients may also use calcium supplementation and bisphosphonates.² Surgeries, such as vertebral osteotomy and total joint replacements, may benefit patients with major spinal deformities or damaged peripheral joints, respectively. However, the

option of surgery is reserved only for extreme cases of AS, since complications are a significant source of morbidity.¹ Physical therapy and regular exercise are also important in managing AS, with the aim of promoting extension and mobility of the spine, encouraging chest expansion and deep breathing, and maintaining an erect posture and healthy fitness level.^{1,6,7} Similarly, certain types of OMT can help achieve these goals and, thus, may play more of an integral role in AS management than it is generally given credit for in the limited available literature on the subject. According to *Foundations for Osteopathic Medicine*, AS patients tolerate indirect techniques like counterstrain (CS) and indirect muscle energy (ME).⁵ On the other hand, techniques like HVLA are usually considered contraindicated in AS patients due to the rigid, abnormal anatomy of the spine.⁸

History

The patient is a 47-year-old Korean male who presented to the clinic complaining of recurrent episodes of pain and stiffness in his neck and lower back, which interfere with sleep. The patient reported the symptoms had increased in frequency and intensity during the past 20 years. He described the pain as dull and achy, and radiating from his neck to the shoulder blades bilaterally, and from his lower back down the posterior aspect of his left thigh along the sciatic nerve. His symptoms are accompanied by a “bad posture,” in which the patient stated he is unable to straighten his back when he attempts to stand or sit up erect. The patient explained he can neither lie comfortably prone because his thoracic spine does not flatten enough for his chest to reach the mattress, nor can his head reach the mattress when lying supine and, thus, requires a stack of pillows to support his head at night. He has attempted to alleviate his symptoms by visiting a chiropractor on several occasions, sleeping on an orthotic pillow and wearing orthopedic shoes, but has achieved only minimal relief. He stated his pain is partially alleviated by stretching for 20 minutes and taking two or three Ibuprofen 200mg, which he takes at night as needed. The patient reported his pain and stiffness are worse at night or when he remains in one position for a prolonged period of time, such as when reading or lying down. He stated that he cannot sleep comfortably in any position, is frequently awakened at night from the pain and has increased morning back stiffness. The patient reported that x-rays taken six years ago by his chiropractor showed a “slight curvature” of his spine.

The patient’s past medical history was significant for gout, hypercholesterolemia and high triglycerides. His gout occurred from 2004 to 2007, which affected his right

big toe and was treated with Indomethacin and Ibuprofen. His current medications include Allopurinol for gout prophylaxis, Indomethacin as needed, Simvastatin and Fenofibrate to control his cholesterol levels, and Ibuprofen 200mg as needed for his neck and back pain. The patient stated he began taking Simvastatin two years ago, and had not noticed any myopathy that can be attributed to adverse effects from the medicine. The patient had no history of past surgeries or hospitalizations. The patient has no food or medication allergies. Family history is significant for hypercholesterolemia, but no cardiac, pulmonary, neurologic, metabolic/endocrine disorders or spondyloarthropathies were reported. The patient is married, lives with his wife and two young daughters, and works as a pastor at a Korean church. He stated he never used tobacco products or illicit drugs. His exercise routine consists of playing volleyball or basketball weekly. The patient denied fever, chills, nausea, vomiting, diarrhea or loss of consciousness. The review of systems was non-contributory, except for the chief complaint and history of present illness.

Physical exam

Physical examination revealed the patient to be a pleasant, well-groomed, married Korean male, dressed in normal street attire, alert and oriented x 3 and not in acute distress. His head was normocephalic and atraumatic. His pupils were equally round and reactive to light. Neurological examination revealed cranial nerves II-XII grossly intact and deep tendon reflexes +3 all around. Muscle strength was 5/5 all around. The patient exhibited a “stooped” posture and normal gait, except for ankle valgus, knee varus (8-10 degrees) and pes planus bilaterally.

Osteopathic structural examination revealed decreased range of motion (ROM) of the lumbar spine with zero degrees of extension, 14 degrees of right sidebending and 18 degrees of left sidebending. The patient demonstrated a normal 90 degrees of lumbar flexion, but had no reversal of lordosis in the flexed position and a flattened lumbar curve. His shoulders were unlevel, with the right shoulder slightly higher than the left, and no compensatory scoliosis in the thoracic or lumbar spines were present. The thoracic spine revealed increased kyphosis, and the patient stood with his head three inches anterior to his coronal axis. The cervical spine did not appear stiffened like the lumbar and thoracic regions, but revealed decreased ROM in extension and left sidebending with normal rotation. He had two tender points along the medial border of the right scapula. The paraspinal muscles along L4-5 were extremely tense and rigid to palpation. The SI joints were freely mobile. During examination, the

patient required a stack of pillows almost one foot tall in order to lie comfortably supine, and he needed to hang his head off of the exam table in order to lie comfortably prone. His straight leg raise test was negative bilaterally.

Assessment and differential diagnosis

Based on clinical evaluation from the office visit, the patient exhibited a significantly rigid thoracic and lumbar spine, suggestive of an underlying pathology beyond somatic dysfunction alone. At this point, the goal is to identify potential conditions in which certain OMT is contraindicated. The differential diagnosis thus far includes: Ankylosing Spondylitis, Diffuse Idiopathic Skeletal Hyperostosis (DISH), Scheuermann's Disease or anatomically short ligaments.

1. Ankylosing Spondylitis is at the top of the differential list due to the extreme rigidity of the thoracic and lumbar spine, the pain pattern, which is worse at night with morning back stiffness, the stooped posture, his male gender and the onset of symptoms in his mid-twenties. However, the patient does not demonstrate SI joint involvement, which is a classic hallmark of the disease. A less equivocal, yet still notable, discrepancy between the patient's presentation and the common findings of AS is his absent family history of spondyloarthropathies. Certain OMT using direct methods on fused portions of the spine is contraindicated in AS cases. Therefore it is important to rule out this condition with x-rays from the patient.
2. DISH is a phenomenon in which the entheses (attachment sites between ligaments, tendons, and joint capsules to bone) tend to calcify, resulting in the characteristic appearance on an x-ray of "candle wax dripping down the spine." DISH spares the SI joints, zygapophyseal joints and intervening intervertebral disk spaces.⁹ The patient may be asymptomatic with absent physical findings on examination. DISH is rarely seen in patients younger than 50 years old, has a slight male predominance and affects two percent of the Japanese population and 0.16 percent in whites.⁹ Although the patient is male and demonstrates SI joint sparing, he is neither asymptomatic nor older than 50 years of age, which does not coincide with the typical DISH findings.
3. Scheuermann's Disease is characterized by hyperkyphosis greater than 40 degrees, decreased disk space height and vertebral wedging of five

degrees in at least three consecutive vertebrae. The disease onset is usually in males 13 to 16 years old. Patients may be asymptomatic or present with pain at the apex of the kyphotic curve of the thoracic spine. When pain is present, it is worsened with activity and relieved with rest—unlike AS, which worsens with inactivity and improves with activity. Other than hyperkyphosis, the patient's findings are not consistent with the typical criteria of Scheuermann's Disease.²

4. Anatomically short ligaments can potentially cause a decreased ROM in the spine and pain and stiffness. However, it remains low on the differential list because it is still unlikely that short ligaments alone can result in the severity of the patient's condition. The extent of his thoracic and lumbar immobility instead suggests an underlying pathology that is much more complex.

In contrast to the rigid nature of the thoracic and lumbar spines, the cervical spine exhibited relatively normal mobility and ROM, which seemed to be limited secondarily to the pathology of the thoracic spine. Therefore, OMT may still be a viable option to normalize the somatic dysfunction in the cervical region. Soft tissue and ME techniques may be attempted to the cervical area to improve ROM and pain. If there are concerns of possible fusion in the cervical spine, then oculocephalyric reflexes may be utilized in lieu of ME. Furthermore, CS may be beneficial in treating the tenderpoints in the shoulder area, and gentle OMT may be used for symptomatic relief to the back muscles. However, clinical evaluation alone is not sufficient enough to rule out the strong possibility that the patient's thoracic and lumbar vertebrae are fused. Therefore, any considerations of OMT will be postponed until radiographs for these regions are obtained and a definitive diagnosis is made.

Treatment plan

Anterior-posterior and lateral x-rays of the thoracic and lumbar spines were ordered, and the patient was instructed to discontinue all contact sports and chiropractor appointments until the x-rays were reviewed. In the meantime, the patient was advised to take up to 12 Ibuprofen 200mg as needed to control the pain. The patient was counseled on the possible gastrointestinal side effects of NSAIDs if he were to exceed 2400mg/day. He was also advised to sleep supine with a stack of pillows to reduce additional strain of the neck muscles and prevent from hyper-extending the cervical spine. The patient was instructed to return to the OMM clinic after receiving the x-ray results, or earlier if his symptoms worsened.

Later that afternoon, the patient delivered his x-rays to the office. The images revealed the classic “bamboo spine” appearance in the thoracic and lumbar regions, which were consistent with AS. The spine was ankylosed from T1 to L1, and there was evidence of active disease and inflammation from L2-4. The kyphotic curve in the thoracic region measured 58 degrees. There was curiously no sign of SI joint involvement. After review of the x-ray findings, the patient was advised to continue Ibuprofen as previously recommended. He was also referred to a rheumatologist to resume further management of the patient. The rheumatologist may explore additional pharmaceutical options with him or opt for further workup of CBC, ESR, HLA-B27 antigen or other imaging studies.

Discussion

The 1984 Modified New York Criteria for diagnosing *definite* AS states that an individual requires radiographic evidence of sacroilitis, plus at least one of the following symptoms: low back pain lasting longer than three months, which is improved with activity and worsened by inactivity, lumbar ROM limitations in sagittal and frontal planes or chest expansion limitations relative to normal values for gender and age.¹ For diagnosis of *probable* AS, all three of the symptom criteria are met, but the radiograph criteria is not. A new criteria that does not require x-rays has recently been suggested, in which the presence of two of the following symptoms yield a 70 percent sensitivity and 81 percent specificity for AS: morning back stiffness lasting longer than 30 minutes, back pain that interrupts sleep in the second half of the night, alternating buttock pain or relief of symptoms with exercise but not with rest.¹ The patient does satisfy the requirements for the latter set of criteria, but, based on the Modified New York Criteria, he does not meet the standards for the definite diagnosis of AS due to lack of SI joint involvement on x-ray. In addition to sparing the SI joints, the progression of the patient’s condition also seems to deviate from the typical pathogenesis of AS. Instead of ascending up the spine from the SI joints to the lumbar and then thoracic regions, the patient seems to demonstrate a descending pattern from T1 to L1, which have since calcified, and currently reveals on x-ray active disease of L2-4, that manifests as his presenting symptom of low back pain. The question at this point remains: is there enough evidence to diagnose the patient as having definite AS with coincidental SI joint sparing or is further testing still warranted to rule out conditions beyond the extent of the original differential diagnosis list?

Due to his uncommon presentation, it was felt to be in the best interest of the patient to defer OMT

for now and refer care to a rheumatologist. However, this case notwithstanding, AS itself is not an absolute contraindication to OMT, contrary to studies concerning OMT for patients with chronic neck and back pain. According to the study by Puentedura, et al.,¹⁰ comparing the effectiveness of HVLA to the cervical versus thoracic region in patients with chronic neck pain, patients with AS, neoplasms, signs of nerve root compression, cervical stenosis, trauma less than six weeks, history of neck surgery, osteopenia, osteoporosis, or rheumatoid arthritis were excluded from the study and deemed too risky for HVLA treatment. In a similar study performed by Licciardone, et al.,⁸ discussing the effectiveness of a combination of OMT including HVLA, CS, ME, myofascial release (MFR), soft tissue (ST), and cranial-sacral on patients with chronic low back pain, patients with the following six conditions were excluded from participating: AS, cancer, cauda equina syndrome, spinal osteomyelitis, spinal fracture or herniated disc.⁸

Although credible studies, such as those of Puentedura and Licciardone, place a red flag on AS patients and deem them contraindicated to OMT for precautionary purposes, certain gentle techniques may actually help improve ROM and posture, and promote the circulation of nutrients and evacuation of metabolic wastes from joint spaces in AS patients.⁵ Indirect ME and CS are the most effective, while forceful, direct techniques like HVLA should be avoided.⁵ *Travell & Simons’ Myofascial Pain* also indicates the usefulness of CS, as well as the spray and stretch method, due to the presence of common tender points and trigger points in the posterior cervical, trapezius, suboccipital and other regions of the neck and thoracic area of AS patients.¹¹

Despite the lack of studies specifically for OMT in AS, the current literature outlining the benefit of exercise, stretching and physical therapy can be used to predict the efficacy of osteopathic manipulation in AS patients. In the highly cited study by Wildberg, Karimi, and Hafstrom,¹² AS patients who received treatment with a specialized physiotherapy program and home exercise regimen demonstrated improved chest expansion, posture, spinal mobility and Bath Ankylosing Spondylitis (BAS) scores. Physiotherapy intervention occurred two hours a week for eight weeks, and consisted of mechanical vibrations and manual massage to the soft tissue of the back muscles, gentle active and passive mobility exercises of the spinal column in flexion, extension, sidebending and rotation, and stretching tight muscles via isometric contraction and relaxation.¹² A few of these improvements remained four months after therapy was discontinued, which demonstrates the importance of a consistent and regular exercise routine.

Furthermore, due to the fact the physical therapy performed in this study mimics ST, MFR and ME techniques, it can be inferred that OMT should reveal similar results in individuals with AS. A similar study by Ince, et al.,¹³ which implemented a 50-minute multimodal exercise program three times a week for 12 weeks in a group of 30 AS patients, revealed improved chest expansion, chin-to-chest distance, Modified Shober Flexion test results and occiput-to-wall distance. Participants also reported a decreased use of NSAIDs for pain control while on the exercise regimen.¹³ The program consisted of stretching, aerobic and deep-breathing exercises, which are similar in effect to MFR, spray and stretch or rib raising OMT. In this way, osteopathic physicians can build on the findings from current research and tailor it to maximally benefit AS patients in their care.

References

1. Brent LH, Diamond HS, ed. Ankylosing Spondylitis and Undifferentiated Spondyloarthritis. Medscape Reference. Updated November 16, 2011. <http://emedicine.medscape.com/article/332945-overview>
2. Nowak JE, Campagnolo DI, ed. Scheuermann's Disease. Medscape Reference. Updated April 2, 2009. <http://emedicine.medscape.com/article/311959>.
3. Gonter NJ. Ankylosing Spondylitis. A.D.A.M. Medical Encyclopedia. PubMed Health. Reviewed June 21, 2011. <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001457>.
4. Ankylosing Spondylitis. Spondylitis Association of America. http://www.spondylitis.org/about/as_diag.aspx.
5. Centers S, Morelli MA, Vallad-Hix C, Seffinger MA. General Pediatrics. In: Ward RC, ed. *Foundations for Osteopathic Medicine, 2nd Edition*. Baltimore: Lippincott, Williams & Wilkins; 2003. 314-315.
6. Brown P. Massage and Ankylosing Spondylitis. Jan 13, 2009. Paul Brown Massage Therapy Pain Relief Center. <http://www.paulbrown.net/massage-ankylosing-spondylitis>.
7. Fisher LR, Cawley MI, Holgate ST. Relation between chest expansion, pulmonary function, and exercise tolerance in patients with ankylosing spondylitis. *Annals of the Rheumatic Diseases*. 1990;49(11):921-925. http://ard.bmj.com/content/49/11/921.abstract?ijkey=b72460d8b8aff3021f286b6c02f64e8d6bf9ec9f&keytype2=tf_ipsecsha
8. Licciardone JC, Stoll ST, Fulda KG, et al. Osteopathic Manipulative Treatment for Chronic Low Back Pain: A Randomized Controlled Trial. *Spine*. July 2003;28(13):1355-1362. http://www.medscape.com/viewarticle/458608_2.
9. Rothschild BM, Grogan DP, ed. Diffuse Idiopathic Skeletal Hyperostosis. Medscape Reference. Updated March 31, 2011. <http://emedicine.medscape.com/article/1258514>.
10. Puentedura EJ, Landers MR, Cleland JA, Mintken P, Huijbregts P, Fernandez-De-Las-Peñas C. Cervical HVLA and Thoracic HVLA for Patients with Neck Pain. *Journal of the American Osteopathic Association*. July 2011; 111(7):428-430.
11. Simons DG, Travell JG, and Simons LS. *Travell & Simons' Myofascial Pain and Dysfunction: The Trigger Point Manual, Vol. 1: Upper Half of Body, 2nd Edition*. Baltimore: Lippincott, Williams & Wilkins; 2003:458-9.
12. Wildberg K, Karimi H, and Hafstrom I. Self- and manual mobilization improves spine mobility in men with ankylosing spondylitis—a randomized study. *Clinical Rehabilitation*. July 2009;23(7):599.
13. Ince G, Sarpel T, Durgun B, and Erdogan S. Effects of a Multimodal Exercise Program for People with Ankylosing Spondylitis. *Journal of the American Physical Therapy Association*. July 2006; 86:(7)924-935. <http://ptjournal.apta.org/content/86/7/924.full>.

Address correspondence to:

Joy Ishii, OMS III

Murray R. Berkowitz, DO, MA, MS, MPH

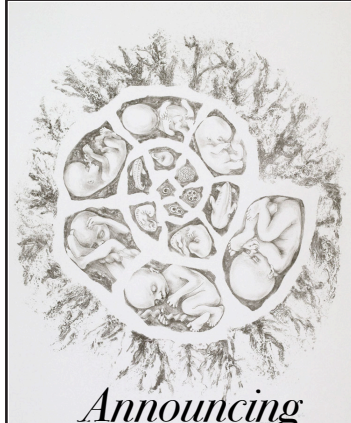
Department of Osteopathic Manipulative Medicine

Philadelphia College of Osteopathic Medicine—Georgia Campus

625 Old Peachtree Road NW

Suwanee, Georgia 30024

murraybe@pcom.edu



These 12 lectures by Dr. Brian Freeman present material that is essential for understanding the basic principles of embryology from a biodynamic perspective. In a well documented and persuasive manner, Dr. Freeman gives an overview of embryology and its clinical importance. Each lecture is approximately 60 minutes long followed by questions and answers from the audience. Dr. Freeman is considered one of the definitive spokespersons for the work of Erich Blechschmidt.

Announcing

Human Embryology from a Biodynamic Perspective

Dr. Brian Freeman's 12 Lecture Series
6 DVD Set - Now in North American Format (NTSC)
Offered at \$119.95

Exclusively from

Books and Bones
booksandbones@verizon.net
951-677-0652 • Fax 951-677-3911
www.booksandbones.com

Exercise Prescription: Greenman's Method

June 8-10, 2012, at South Pointe Hospital in Warrensville Heights, OH

Course Description

This course will demonstrate how to access muscle balance of the musculoskeletal system, particularly in reference to somatic dysfunction. The primary goal is to prescribe an exercise program and self-mobilization techniques to fit patients' somatic dysfunction in order for them to manage themselves.

Objectives

1. To understand the functional anatomical connections of upper and lower quarter musculature to the proximal trunk and pelvis.
2. To introduce the concept of neuromuscular imbalance as a contribution to musculoskeletal dysfunction.
3. To learn exercises to address specific somatic dysfunctions found in the vertebral column and pelvis.
4. To be able to design and sequence a home exercise program for patients to complement manual medicine.
5. To be able to instruct patients on an exercise program based on their functional goals and lifestyle.

Prerequisites

A basic understanding of functional anatomy and one Level I course or its equivalent.

CME

20 hours of AOA Category 1-A credit is anticipated



Program Chair



Brad Sandler, DO, is a 1992 graduate of Des Moines University College of Osteopathic Medicine. He completed his rotating internship at Oakland General Hospital in Madison Heights, MI, and his residency training in osteopathic manipulation and biomechanics at Michigan State University College of Osteopathic

Medicine. He joined Corrective Care in Mishawaka, IN, in 1995, and became its vice president in 1999. Dr. Sandler is board certified in NMM/OMM, and specializes in the treatment of difficult muscle, tendon, ligament and joint pain syndromes. Dr. Sandler not only teaches exercise prescription, but takes his own medicine by incorporating exercise into his lifestyle for the past 30 years.

Course Times

Friday and Saturday: 8:00 am - 5:00 pm (lunch provided)
Sunday: 8:00 am - 12:00 pm (lunch on your own)

Course Location

South Pointe Hospital
20000 Harvard Rd.
Warrensville Heights, OH 44122
(216) 491-6000

Travel Arrangements

Call Tina Callahan of Globally Yours Travel at (800) 274-5975

Registration Form

Exercise Prescription: Greenman's Method June 8-10, 2012

Name: _____ AOA#: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

Billing Address (if different than above): _____

Registration Rates

On or before 5/10/2012; After 5/10/2012

AAO Member	\$ 680.00	\$ 780.00
AAO Non-Member	\$ 780.00	\$ 880.00
Student/Intern/Resident	\$ 580.00	\$ 680.00

The AAO accepts check, Visa, Mastercard or Discover payments in U.S. dollars

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy to charge the above credit card for the full course registration amount.

Signature: _____

Click here to view the **AAO's Cancellation and Refund Policy**

**Please submit registration form and payment via mail to the American Academy of Osteopathy,
3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268 or by fax to (317) 879-0563.
Or register online at www.academyofosteopathy.org**

From The Archives

From: Still AT. *The Autobiography of A.T. Still*. Kirksville, MO: Published by the author; 1908: 324-328.

As has been before stated, the object of Osteopathy is to improve upon the present systems of surgery, midwifery, and treatment of general diseases; it is a system of healing which reaches both internal and external diseases by manual operations and without drugs. In the common acceptation of the word, as popularly understood, surgery means cutting, and any reference to a surgeon's work calls up a mental picture of such instruments as the knife, scalpel, or lance, and their use upon the human body. We accept that part of surgery also as being of great use and benefit to mankind. An Osteopath will use a knife to remove any useless part as quickly as a carpenter would use a saw to remove a useless piece of timber.

We recognize the necessity for bandages, lint, splints, stays, and anesthetics, because they have proven their beneficial use.

But when should the knife be used? Never, until all nerves, veins, and arteries have failed to restore a healthy condition of the body in all its parts and functions. The great failing of many who enter surgical work is their too frequent use of the knife and the anesthetic. Where chloroform is used a hundred times, ninety-nine times it could have been avoided with beneficial results to the patient.

Many are the sufferers going through life disfigured, maimed, or deprived of some essential organ, who should have had their body restored to a perfect condition without it being mutilated.

The oftener the knife is used upon the limbs, body, or head for any purpose, the more positively is shown an inexcusable ignorance of the natural law, which we recognize as a law able to restore any and all parts where death of the tissues has not occurred.

What can Osteopathy give us in place of drugs? That is a great question which doctors ask in thunder-tones. Tell them to be seated, and listen to a few truths and questions. "What will you give in place of drugs?" We have nothing we can give in place of calomel, because Osteopathy does not ruin your teeth, nor destroy the stomach, liver, nor any organ or substance in the system. We cannot give you anything in place of the deadly nightshade, whose poison reaches and ruins the eyes, in

sight and shape, and makes tumors great and small. We have nothing to give in place of aloes, which purge a few times and leave you with unbearable piles for life.

We have nothing to give in place of morphine, chloral, digitalis, veratrine, pulsatilla, and all the deadly sedatives of all schools. We know they will kill, and that is all we know about them. We do not know that they ever cured a single case of sickness, but we do know they have slain thousands, and we cannot give anything that will take their places. Their action is to ruin for life, and Osteopathy considers life too precious to place its chances in jeopardy by any means or methods. In answer to the inquiry, "What can you give us in place of drugs?" we cannot add or give anything from the material world that would be beneficial to the workings of a perfect machine, that was made and put in running order, according to God's judgment, in the construction of all its parts, to add to its form and power day by day, and carry out all exhausted substances that have been made so by wear and motion.

If this machine is self-propelling, self-sustaining, having all the machinery of strength, all the thrones of reason established, and all working to perfection, is it not reasonable to suppose that the amount of wisdom thus far shown in the complete forms and the workings of the chemical department, the motor department, the nutritive, sensory, the compounding of elements, the avenues and power to deliver these compounds to any part of the body, to form the newly compounded fluids, any change in the chemical quality. that is necessary for renovation and restoration to health?

When we see the readiness of the brain to supply sensation and motion, and we are notified of an unnecessary accumulation at any point of the body by sensation or misery, we want that overaccumulation removed, for it is making inroads on life through the sensory ganglion to all its centers, which, we know, when fully possessed by diseased fluids, produce death from climatic conditions or diseases of the seasons as they come and go.

If life yields to the poisonous fluids that are generated during their detention and chemical changes, why not conclude at once that the motor power was insufficient to keep in action the machinery of renovation through the excretory system; and reason proceeds at once

to reach the oppressed points and centers through which the vaso-motor or other nerves are irritated, causing the venous circulation to be so feeble as to allow diseased fluids to accumulate locally or generally through the system, for such a length of time that the fluids become deadly in their nature by the power of separation being overcome and lost.

Osteopathy reasons that the special or general power of all nerves must be free to travel through all parts of the body without any obstruction, which may be caused by a dislocated bone, a contracted, shrunken, or enlarged muscle, nerve, vein, or artery. When enlarged or diminished they are abnormal in form, and all their actions in and for life, must be strictly in obedience to the law of force, found

in the heart, brain, and the whole sensory system.

If you have a thorough and practical acquaintance, through anatomy and physiology, with the form and workings of the machinery of life and health, and treat it as a skillful physiological engineer should, then you are prepared to say to the doctors of medicine, We have found no place in the whole human body where you can substitute anything but death in place of life. Remove all obstructions, and when it is intelligently done, nature will kindly do the rest.

Editor's Note: This excerpt was selected and prepared for publication by Raymond J. Hruby, DO, FAAO.

CLASSIFIED ADVERTISEMENTS

SEATTLE PHYSICIAN OPPORTUNITY

Contact Stephen Cavanaugh, DO, at seattledo@gmail.com or (206) 834-5438. Web site for the practice is SeattleDO.com.

PRACTICE AVAILABLE IN VIRGINIA

Osteopathic practice for sale in McLean, VA, 22101. Established and long-standing patient base. Patients are most familiar with being treated using Fulford percussion technique, cranial osteopathy (standard and Jealous-biodynamic) and ME. Expected income from practice approximately \$200,000 plus. Sale price \$100,000. Reason for sale is relocation. If interested, e-mail lillyarm1360@gmail.com or call Lillian Somner, DO, at (301) 305-1119 (cell).

DO SOUGHT IN CALIFORNIA

We are an innovative medical group in beautiful San Francisco, looking for an osteopathic primary care physician interested in doing OMT. We are a primary care group that believes there's a better way to practice medicine. Balanced lifestyle, working with academically trained MDs, started by original designer of Epocrates. If interested, please send a brief intro and CV to: jobs@onemedical.com.

NEW NMM PLUS 1 RESIDENCY PROGRAM

There is a new NMM Plus 1 Residency at Southampton Hospital in beautiful Southampton, Long Island. Applications are currently being accepted. If interested, please contact Program Director Denise K. Burns, DO, FAAO, at drdenise@optonline.net or Education Department Secretary Karen Roberts at (631) 726-0409.

DO/MD/NP WANTED IN NEBRASKA

For Omaha, NE, wellness center offering Christian-based prayer and emotional conflict resolution, cranial osteopathy, nutritional/homeopathic/herbal support, ondamed, lymphstar, sauna, intravenous therapies and natural skin aesthetics, etc., for all types of conditions. Four-day work week, no hospital call. "Fee for service," no third-party contracts. Send resume to kay@cph.omhcoxmail.com or call (402) 343-7963.

PRACTICE OSTEOPATHY IN BEAUTIFUL COLORADO

Successful integrative practice seeks a board certified/eligible NMM/OMM physician for its busy Denver office. Preferably someone comfortable with a broad variety of techniques. Very competitive compensation. Friendly and professional atmosphere. Please call (303) 781-7862 or e-mail CV to mgentile@cointegrative.com. Our website is www.cointegrative.com.

2011 AAO Journal Index

BY AUTHOR

Archer, DO (UK), Jamie

Manipulative methods of Dr. A.T. Still. Vol. 21, No. 4, Dec. 2011, pp. 19-25

Berkowitz, DO, MA, MS, MPH, Murray R.

Flawed science is not evidence-based osteopathic medicine. Vol. 21, No. 2, June 2011, pp. 6-7

Osteopathic approach to a patient with chronic fatigue syndrome. Vol. 21, No. 2, June 2011, pp. 37-47

Osteopathic Manipulative Treatment of Isolated Chronic Sphenoidal Sinusitis in a Post-Sinus Surgery Patient. Vol. 21, No. 1, March 2011, pp. 24-27

Osteopathic Scholarship, Research and Publication. Vol. 21, No. 1, March 2011, pp. 8, 11

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach. Vol. 21, No. 4, Dec. 2011, pp. 35-39

View From the Pyramids: Increasing the number of osteopathic graduate medical education programs—"The time has come..." Vol. 21, No. 4, Dec. 2011, pp. 4-5

View From the Pyramids: Eating our seed corn—Again! Vol. 21, No. 3, Sep. 2011, pp. 6-7

Blumer, DO, Janice

Jenette "Nettie" Bolles: The first woman to pioneer osteopathy. Vol. 21, No. 2, June 2011, pp. 32-35

Booth, Emmons Rutledge

From the Archives: *History of Osteopathy and Twentieth Century Medical Practice*. Vol. 21, No. 2, June 2011, p. 49

Chappell, DO, Craig

Evaluating the Perception of Motion in Osteopathic Medical Students, Residents and Physicians. Vol. 21, No. 1, March 2011, pp. 38-42

Chong, MS, Anne

Osteopathic approach to a patient with chronic fatigue syndrome. Vol. 21, No. 2, June 2011, pp. 37-47

Ciranna-Raab, DO (Germany/Italy), Cristian

Osteopathic manual treatment of children with scarlet fever in the nineteenth and twentieth centuries. Vol. 21, No. 3, Sep. 2011, pp. 16-22

Clark, DO, MS, Robert C.

A Clinician's Advice to Students. Vol. 21, No. 1, March 2011, pp. 9-11

A conversation with the dean: A true story. Vol. 21, No. 2, June 2011, pp. 8-9

Maintaining McManis Treatment Tables. Vol. 21, No. 1, March 2011, pp. 34-35

OMT and exercise for a patient with limited knee range of motion prior to knee replacement: A case report. Vol. 21, No. 4, Dec. 2011, pp. 32-33

Dankert, OMS IV, Kevin

Evaluating the Perception of Motion in Osteopathic Medical Students, Residents and Physicians. Vol. 21, No. 1, March 2011, pp. 38-42

Degenhardt, DO, Brian F.

The 2011 Thomas L. Northup, DO, Memorial Lecture—A Road Less Traveled: Osteopathy's Legacy, Osteopathic Medicine's Challenge. Vol. 21, No. 4, Dec. 2011, pp. 7-14

Dickey, DO, FAAO, Jerry L.

Haraold A. Blood, DO, FAAO, Memorial Lecture: 100 Years of Osteopathic Leadership. Vol. 21, No. 3, Sep. 2011, pp. 10-15

Dogbey, PhD, Godwin

Evaluating the Perception of Motion in Osteopathic Medical Students, Residents and Physicians. Vol. 21, No. 1, March 2011, pp. 38-42

Ehrenfeuchter, DO, FAAO, Walter C.

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach. Vol. 21, No. 4, Dec. 2011, pp. 35-39

Ferronato, OMS IV, Mariko

The use of video in teaching psychomotor skills: A look at a new way of teaching osteopathic manipulative treatment to a remote campus. Vol. 21, No. 2, June 2011, pp. 10-21

Flatscher, PhD (Austria), Matthias

What is health? What is disease? Thoughts on a complex issue. Vol. 21, No. 4, Dec. 2011, pp. 27-30

Fryette, DO, Harrison H.

From the Archives: *Principles of Osteopathic Technic*. Vol. 21, No. 1, March 2011, pp. 36-37

Giusti, DO, Rebecca

Book Review: *The Feminine Touch*. Vol. 21, No. 3, Sep. 2011, p. 9

Gough, OMS III, Angela

Relieving depression in an elderly woman with osteopathic manipulative treatment: A case report. Vol. 21, No. 2, June 2011, pp. 50-52

Hruby, DO, FAAO, Raymond J.

The use of video in teaching psychomotor skills: A look at a new way of teaching osteopathic manipulative treatment to a remote campus. Vol. 21, No. 2, June 2011, pp. 10-21

View from the Pyramids: Finding a mentor: Why and how? Vol. 21, No. 2, June 2011, pp. 4-5

View from the Pyramids: Integrating Osteopathic Principles into Daily Practice. Vol. 21, No. 1, March 2011, pp. 6-7

Ishii, OMS III, Joy

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach. Vol. 21, No. 4, Dec. 2011, pp. 35-39

Kalich, DO, Allen

Relieving depression in an elderly woman with osteopathic manipulative treatment: A case report. Vol. 21, No. 2, June 2011, pp. 50-52

Liem, DO (Germany), Torsten

Osteopathic manual treatment of children with scarlet fever in the nineteenth and twentieth centuries. Vol. 21, No. 3, Sep. 2011, pp. 16-22

What is health? What is disease? Thoughts on a complex issue. Vol. 21, No. 4, Dec. 2011, pp. 27-30

Miller, DO, David S.

A “System” of Cranial Manipulation. Vol. 21, No. 1, March 2011, pp. 28-32

Nelson, DO, FAAO, FACOFP, Kenneth

The 2010 Northup Memorial Lecture: Low Frequency Oscillations in Human Physiology and Cranial Osteopathy. Vol. 21, No. 1, March 2011, pp. 12-23

Novoseltsev, DO, S.V.

Dynamics of indicators of quality of life in patients with chronic pain syndrome in the lumbus and lower extremities after osteopathic treatment. Vol. 21, No. 3, Sep. 2011, pp. 31-37

Spondylogenic-cranial biomechanical disorders in patients with chronic cerebrovascular insufficiency in the vertebrobasilar basin and their osteopathic correction. Vol. 21, No. 3, Sep. 2011, pp. 43-49

Olds, OMS IV, UTF, Kristie M.

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach. Vol. 21, No. 4, Dec. 2011, pp. 35-39

Peeters, DO (UK), Luc

The iliolumbar ligaments: A literature study. Vol. 21, No. 2, June 2011, pp. 22-29

Shah, OMS III, Rani

Osteopathic Manipulative Treatment of Isolated Chronic Sphenoidal Sinusitis in a Post-Sinus Surgery Patient. Vol. 21, No. 1, March 2011, pp. 24-27

Smith, R.K.

From the Archives: Osteopathic Specialists. Vol. 21, No. 3, Sep. 2011, pp. 39-41

Stark, DOMP (Canada), Jane

Sutherland’s Signature. Vol. 21, No. 3, Sep. 2011, pp. 39-41

Still, MD, DO, Andrew Taylor

From the Archives: *Autobiography of A.T. Still*. Vol. 21, No. 4, Dec. 2011, pp. 41-42

Yakovets, DO, G.V.

Dynamics of indicators of quality of life in patients with chronic pain syndrome in the lumbus and lower extremities after osteopathic treatment. Vol. 21, No. 3, Sep. 2011, pp. 31-37

BY SUBJECT

Andrew Taylor Still, MD, DO

Manipulative methods of Dr. A.T. Still; Jamie Archer, DO (UK); Vol. 21, No. 4, Dec. 2011, pp. 19-25

Ankylosing spondylitis

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach; Joy Ishii, OMS III; Walter C. Ehrenfeuchter, DO, FAAO; Kristie M. Olds, OMS IV, UTF; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 4, Dec. 2011, pp. 35-39

Book Review

Book Review: *The Feminine Touch*; Rebecca Giusti, DO; Vol. 21, No. 3, Sep. 2011, p. 9

Case Study

Osteopathic approach to a patient with chronic fatigue syndrome; Anne Chong, MS; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 2, June 2011, pp. 37-47

OMT and exercise for a patient with limited knee range of motion prior to knee replacement: A case report; Robert C. Clark, DO, MS; Vol. 21, No. 4, Dec. 2011, pp. 32-33

Osteopathic Manipulative Treatment of Isolated Chronic Sphenoidal Sinusitis in a Post-Sinus Surgery Patient; Rani Shah, OMS III; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 1, March 2011, pp. 24-27

Relieving depression in an elderly woman with osteopathic manipulative treatment: A case report; Angela Gough, OMS III; Allen Kalich, DO; Vol. 21, No. 2, June 2011, pp. 50-52

Sacroiliac joint sparing in a patient with ankylosing spondylitis—An osteopathic approach; Joy Ishii, OMS III; Walter C. Ehrenfeuchter, DO, FAAO; Kristie M. Olds, OMS IV, UTF; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 4, Dec. 2011, pp. 35-39

Cerebrovascular Insufficiency

Dynamics of indicators of quality of life in patients with chronic pain syndrome in the lumbus and lower extremities after osteopathic treatment; S.V. Novoseltsev, DO; Vol. 21, No. 3, Sep. 2011, pp. 31-37

Chronic Fatigue Syndrome

Osteopathic approach to a patient with chronic fatigue syndrome; Anne Chong, MS; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 2, June 2011, pp. 37-47

Chronic Pain Syndrome

Dynamics of indicators of quality of life in patients with chronic pain syndrome in the lumbus and lower extremities after osteopathic treatment; G.V. Yakovets, DO; S.V. Novoseltsev, DO; Vol. 21, No. 3, Sep. 2011, pp. 31-37

Cranial Osteopathy

A “System” of Cranial Manipulation; David S. Miller, DO; Vol. 21, No. 1, March 2011, pp. 28-32

The 2010 Northup Memorial Lecture: Low Frequency Oscillations in Human Physiology and Cranial Osteopathy; Kenneth Nelson, DO, FAAO, FACOFP; Vol. 21, No. 1, March 2011, pp. 12-23

Depression

Relieving depression in an elderly woman with osteopathic manipulative treatment: A case report; Angela Gough, OMS III; Allen Kalich, DO; Vol. 21, No. 2, June 2011, pp. 50-52

Disease

What is health? What is disease? Thoughts on a complex issue; Matthias Flatscher, PhD (Austria); Torsten Liem, DO (Germany); Vol. 21, No. 4, Dec. 2011, pp. 27-30

Evidence-Based Osteopathic Medicine

Flawed science is not evidence-based osteopathic medicine; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 2, June 2011, pp. 6-7

From the Archives

From the Archives: *Autobiography of A.T. Still*; Andrew Taylor Still, MD, DO; Vol. 21, No. 4, Dec. 2011, pp. 41-42

From the Archives: *History of Osteopathy and Twentieth Century Medical Practice*; Emmons Rutledge Booth; Vol. 21, No. 2, June 2011, p. 49

From the Archives: Osteopathic Specialists; R.K. Smith; Vol. 21, No. 3, Sep. 2011, pp. 39-41

From the Archives: *Principles of Osteopathic Technic*; Harrison H. Fryette, DO; Vol. 21, No. 1, March 2011, pp. 36-37

Harold A. Blood DO, FAAO, Memorial Lecture

Harold A. Blood, DO, FAAO Memorial Lecture: 100 Years of Osteopathic Leadership; Jerry L. Dickey, DO, FAAO; Vol. 21, No. 3, Sep. 2011, pp. 10-15

Health

What is health? What is disease? Thoughts on a complex issue; Matthias Flatscher, PhD (Austria); Torsten Liem, DO (Germany); Vol. 21, No. 4, Dec. 2011, pp. 27-30

History of Osteopathy

Harold A. Blood, DO, FAAO, Memorial Lecture: 100 Years of Osteopathic Leadership; Jerry L. Dickey, DO, FAAO; Vol. 21, No. 3, Sep. 2011, pp. 10-15

The 2011 Thomas L. Northup, DO, Memorial Lecture—A Road Less Traveled: Osteopathy's Legacy, Osteopathic Medicine's Challenge; Brian F. Degenhardt, DO, FAAO; Vol. 21, No. 4, Dec. 2011, pp. 7-14

Human Physiology

The 2010 Northup Memorial Lecture: Low Frequency Oscillations in Human Physiology and Cranial Osteopathy; Kenneth Nelson, DO, FAAO, FACOFP; Vol. 21, No. 1, March 2011, pp. 12-23

Iliolumbar Ligaments

The iliolumbar ligaments: A literature study; Luc Peeters, DO (UK); Vol. 21, No. 2, June 2011, pp. 22-29

Jenette Bolles, DO

Jenette "Nettie" Bolles: The first woman to pioneer osteopathy; Janice Blumer, DO; Vol. 21, No. 2, June 2011, pp. 32-35

McManis Treatment Tables

Maintaining McManis Treatment Tables; Robert C. Clark, DO, MS; Vol. 21, No. 1, March 2011, pp. 34-35

Mentorship

Finding a mentor: Why and how? Raymond J. Hruby, DO, FAAO; Vol. 21, No. 2, June 2011, pp. 4-5

Osteopathic Graduate Medical Education

Eating our seed corn—Again! Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 3, Sep. 2011, pp. 6-7

Increasing the number of osteopathic graduate medical education programs—"The time has come..." Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 4, Dec. 2011, pp. 4-5

Osteopathic Principles

Integrating Osteopathic Principles into Daily Practice; Raymond J. Hruby, DO, FAAO; Vol. 21, No. 1, March 2011, pp. 6-7

Osteopathic Publication

Osteopathic Scholarship, Research and Publication; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 1, March 2011, pp. 8, 11

Osteopathic Research

Osteopathic Scholarship, Research and Publication; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 1, March 2011, pp. 8, 11

Osteopathic Scholarship

Osteopathic Scholarship, Research and Publication; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 1, March 2011, pp. 8, 11

Psychomotor Skills

The use of video in teaching psychomotor skills: A look at a new way of teaching osteopathic manipulative treatment to a remote campus; Mariko Ferronato, OMS IV; Raymond J. Hruby, DO, FAAO; Vol. 21, No. 2, June 2011, pp. 10-21

Perception of Motion

Evaluating the Perception of Motion in Osteopathic Medical Students, Residents and Physicians; Craig Chappell, DO; Godwin Dogbey, PhD; Kevin Dankert, OMS IV; Vol. 21, No. 1, March 2011, pp. 38-42

Scarlet Fever

Osteopathic manual treatment of children with scarlet fever in the nineteenth and twentieth centuries; Torsten Liem, DO (Germany); Cristian Ciranna-Raab, DO (Germany/Italy); Vol. 21, No. 3, Sep. 2011, pp. 16-22

Sinusitis

Osteopathic Manipulative Treatment of Isolated Chronic Sphenoidal Sinusitis in a Post-Sinus Surgery Patient; Rani Shah, OMS III; Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 1, March 2011, pp. 24-27

Thomas L. Northup Memorial Lecture

The 2010 Northup Memorial Lecture: Low Frequency Oscillations in Human Physiology and Cranial Osteopathy; Kenneth Nelson, DO, FAAO, FACOFP; Vol. 21, No. 1, March 2011, pp. 12-23

The 2011 Thomas L. Northup, DO, Memorial Lecture—A Road Less Traveled: Osteopathy's Legacy, Osteopathic Medicine's Challenge; Brian F. Degenhardt, DO, FAAO; Vol. 21, No. 4, Dec. 2011, pp. 7-14

View from the Pyramids

Eating our seed corn—Again! Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 3, Sep. 2011, pp. 6-7

Finding a mentor: Why and how? Raymond J. Hrubby, DO, FAAO; Vol. 21, No. 2, June 2011, pp. 4-5

Increasing the number of osteopathic graduate medical education programs—“The time has come...” Murray R. Berkowitz, DO, MA, MS, MPH; Vol. 21, No. 4, Dec. 2011, pp. 4-5

Integrating Osteopathic Principles into Daily Practice; Raymond J. Hrubby, DO, FAAO; Vol. 21, No. 1, March 2011, pp. 6-7

William Garner Sutherland, DO
Sutherland’s Signature. Jane Stark, DOMP (Canada); Vol. 21, No. 3, Sep. 2011, pp. 39-41

Women in Osteopathic Medicine
Book Review: *The Feminine Touch: Women in Osteopathic Medicine*; Rebecca Giusti, DO; Vol. 21, No. 3, Sep. 2011, p. 9

Jenette “Nettie” Bolles: The first woman to pioneer osteopathy; Janice Blumer, DO; Vol. 21, No. 2, June 2011, pp. 32-35

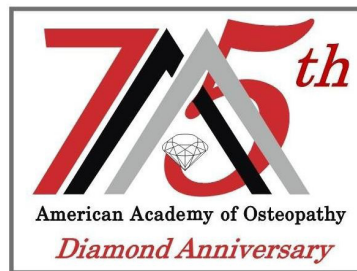
MARK YOUR CALENDARS!

2012 Annual AAO Convocation

March 21-25, 2012

The Galt House Hotel, Louisville, KY

Join us in celebrating our



The Unified Osteopathic Field Theory

Kenneth J. Lossing, DO, Program Chair

Come to Louisville and join us in learning the most recent advances and updates in the science, art and practice of osteopathy! More than 130 years ago, Dr. Still discovered there was a relationship between mechanical tension and health. It took modern science another 100 years to find out why this is true. We now know that mechanotransduction affects genetic regulation. The cells are affected by, and respond to, their environment. The extracellular matrix is connected to the cellular adhesion molecules, microtubules and microfilaments, and the nucleus. Genetic regulation affects fluid and nutritional exchange, cell health and programmed cell death. This opens the vision of osteopathic approaches to nearly all anatomical structures: arteries, nerves, viscera, bones, vertebral discs and many others.

All of the body’s systems are partners; they interact. As physicians, we are partners with our patients to help find their greatest health. We will also share the newest updates in biomechanics, counterstrain, cranial (the brain), Still technique, myofascial chains, exercise, light therapy, scoliosis and HVLA.

AAOJ Submission Checklist

For more information on the elements in this checklist, see “AAOJ Instructions for Contributors” at www.academyofosteopathy.org

Manuscript Submission

- Submission e-mailed to AAOJ’s Scientific Editor at editoraaoj@gmail.com or mailed on CD-ROM to the AAOJ’s Managing Editor, American Academy of Osteopathy, 3500 DePauw Boulevard, Suite 1080, Indianapolis, IN 46268
- Manuscript formatted in Microsoft Word for Windows (.doc), text document format (.txt) or rich text format (.rtf)

Manuscript Components

- Cover letter addressed to the AAOJ’s Scientific Editor, Murray R., DO, MA, MS, MPH, with any special requests (e.g., rapid review) noted and justified
- Title page, including the authors’ full names and financial or other affiliations, as well as disclosure of the financial support related to original research described in the manuscript
- “Abstract” (see “Abstract” section in “AAOJ Instructions for Contributors” for additional information)
- “Methods” section
 - the name of the public registry in which the trial is listed, if applicable
 - ethical standards, therapeutic agents or devices, and statistical methods defined
- Four multiple-choice questions for the continuing medical education quiz and brief discussions of the correct answers
- Editorial conventions adhered to
 - units of measure given with all laboratory values
 - on first mention, all abbreviations other than measurements placed in parentheses after the full names of the terms, as in “American Academy of Osteopathy (AAO)”
- Numbered references, tables and figures cited sequentially in the text
 - journal articles and other material cited in the “References” section follow the guidelines described in the most current edition of the *AMA Manual of Style: A Guide for Authors and Editors*.
 - references include direct, open-access URLs to posted, full-text versions of the documents
 - photocopies provided for referenced documents not accessible through URLs

- “Acknowledgments” section with a concise, comprehensive list of the contributions made by individuals who do not merit authorship credit and permission from each individual to be named in print
- For manuscripts based on survey data, a copy of the original validated survey and cover letter

Graphic Elements

- Graphics should be formatted as specified in the “Graphic Elements” section of “AAOJ Instructions for Contributors”
- Each graphic element cited in numerical order (e.g., *Table 1*, *Table 2*, and *Figure 1*, *Figure 2*) with corresponding numerical captions in the manuscript
- For reprinted or adapted tables, figures and illustrations, a full bibliographic citation given, providing appropriate attribution

Required Legal Documentation

- For reprinted or adapted tables, figures and illustrations, permission to reprint from the publisher in the AAOJ’s print and online versions accompanied by photocopies of the original work
- For photographs in which patients are featured, signed and dated “Patient-Model Release” forms submitted
- For named sources of unpublished data and individuals listed in the “Acknowledgments” section, permission to publish their names in the AAOJ obtained.
- For authors serving in the U.S. military, the armed forces’ approval of the manuscript and institutional or military disclaimers submitted

Financial Disclosure and Conflict of Interest

Authors are required to disclose all financial and non-financial relationships related to the submission’s subject matter. All disclosures should be included in the manuscript’s title page. See the “Title page” section of “AAOJ Instructions to Contributors” for examples of relationships and affiliations that must be disclosed. Those authors who have no financial or other relationships to disclose must indicate that on the manuscript’s title page (e.g., “Dr Jones has no conflict of interest or financial disclosure relevant to the topic of the submitted manuscript”).

Component Societies and Affiliated Organizations

Upcoming Calendar of Events

January 13 - 15

*Iowa Chapter ACOFP & Iowa Osteopathic Medical Association
Midwinter Osteopathic Family Practice Conference*
Embassy Suites on the River, Des Moines, IA
Phone: (515) 283-0002 Fax: (515) 283-0355
E-mail: leah@ioma.org
Web site: <http://www.ioma.org>

January 18 - 21

*Pinellas County Osteopathic Medical Society
23rd Annual Winter Seminar & National Clinical Update*
Tradewinds Resort, St. Pete Beach, FL
CME: 27 Category 1-A AOA credits anticipated
Phone: (727) 581-9069 Fax: (727) 581-8537
E-mail: belliveau@aol.com

January 18 - 22

*Nevada Osteopathic Medical Association
18th Annual Winter Medical Symposium*
Embassy Suites Lake Tahoe Resort, South Lake Tahoe, CA
CME: 30 Category 1-A AOA credits anticipated
Phone: (702) 434-7112 Fax: (702) 434-7110
E-mail: nvoma@earthlink.net
Web site: <http://www.nevadaosteopathic.org>

January 20 - 22

Oklahoma Osteopathic Association Winter Seminar
Hard Rock Casino, Catoosa, OK
CME: 17 Category 1-A AOA credits anticipated
Phone: (405) 528-4848 Fax: (405) 528-6102
E-mail: ooa@okosteo.org
Web site: <http://www.okosteo.org>

January 27 - 29

*Osteopathic Cranial Academy Intermediate Course
The Inherent Motility of the Brain and Spinal Cord, Part II*
Paul Dart, MD; Therese Scott, DO; Bruno Chikly, MD, DO
AZCOM, Glendale, AZ
CME: 22 Category 1-A AOA credits anticipated
Phone: (317) 581-0411 Fax: (317) 580-9299
E-mail: info@cranialacademy.org
Web site: <http://www.cranialacademy.com>

February 3 - 5

*Texas Osteopathic Medical Association
56th Annual Mid-Winter Conference*
The Westin Park Central, Dallas, TX
CME: 16 Category 1-A AOA credits anticipated
Phone: (512) 708-8662 Fax: (512) 708-1415
E-mail: toma@txosteo.org
Web site: <http://www.txosteo.org/>

February 10 - 12

Maine Osteopathic Association Annual Mid-Winter Conference
Holiday Inn by the Bay, Portland, ME
CME: 23.25 Category 1-A AOA credits anticipated
Phone: (207) 623-1101 Fax: (207) 623-4228
E-mail: info@mainedo.org
Web site: <http://www.mainedo.org>

February 11 - 15

*Osteopathic Cranial Academy Introductory Course
Osteopathy in the Cranial Field*
Eric Dolgin, DO
Sheraton Harbor Island, San Diego, CA
CME: 40 Category 1-A AOA credits anticipated
Phone: (317) 581-0411 Fax: (317) 580-9299
E-mail: info@cranialacademy.org
Web site: <http://www.cranialacademy.com>

February 17 - 19

*Osteopathic Cranial Academy Intermediate Course
Changing Lives: Cranial Osteopathy's Gift to Children*
Margaret Sorrel, DO; Miriam Mills, MD
Sheraton Harbor Island, San Diego, CA
CME: 20.5 Category 1-A AOA credits anticipated
Phone: (317) 581-0411 Fax: (317) 580-9299
E-mail: info@cranialacademy.org
Web site: <http://www.cranialacademy.com>

March 9 - 11

*An Osteopathic Approach: Introduction and
Hip Joint & Lower Extremities*
UNECOM, Biddeford, ME
CME: 20 Category 1-A AOA credits anticipated
Phone: (207) 602-2589 Fax: (207) 602-5957
E-mail: cme@une.edu
Web site: www.une.edu/com/cme

March 11 - 15

*American College of Osteopathic Obstetricians &
Gynecologists 79th Annual Conference*
Loews Ventana Canyon Hotel, Tuscon, AZ
CME: 25.5 Category 1-A AOA credits anticipated
Phone: (817) 377-0421 Fax: (817) 377-0439
E-mail: cme@acoog.org Web site: www.acoog.org

March 15 - 18

*American College of Osteopathic Family Physicians
49th Annual Convention and Scientific Seminar*
Gaylord Palms Resort & Convention Center, Kissimmee, FL
Phone: (800) 323-0794 Fax: (847) 228-9755
E-mail: joank@acofp.org
Web site: <http://www.acofp.org>