

The AAO

FORUM FOR OSTEOPATHIC THOUGHT

# JOURNAL

Official Publication of the American Academy of Osteopathy

TRADITION SHAPES THE FUTURE

VOLUME 25 • NUMBER 3 • DECEMBER 2015



*Headache disorders affect 47% of adults. In the case study that begins on page 22, Jennifer S. Ribar, DO, and Todd A. Capistrant, DO, MHA, describe how they used osteopathic cranial manipulative medicine and the fascial distortion model complementarily to resolve a patient's daily migraine.*

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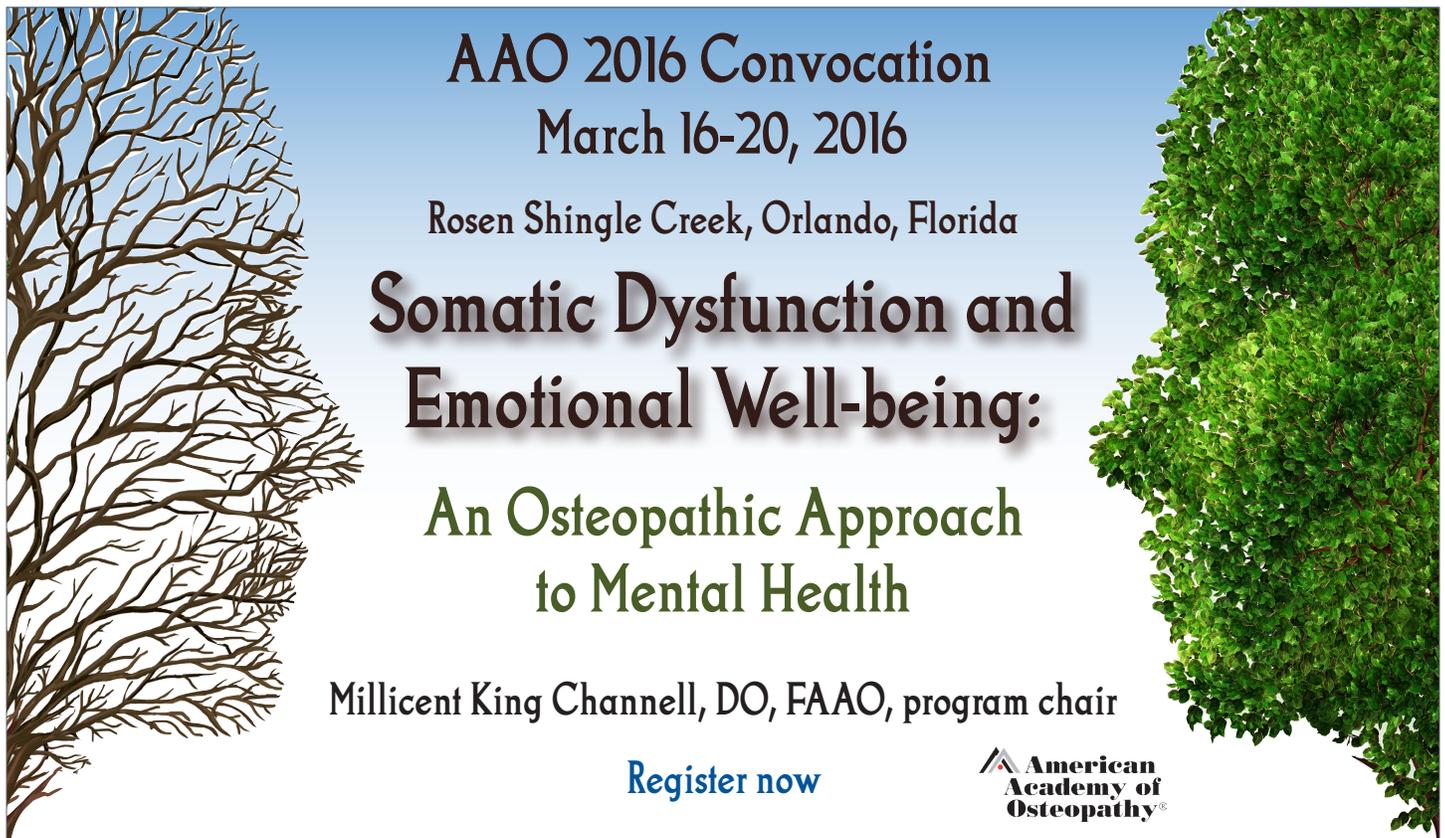
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THE AAO FORUM FOR OSTEOPATHIC THOUGHT

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Official Publication of the American Academy of Osteopathy®

TRADITION SHAPES THE FUTURE • VOLUME 25 • NUMBER 3 • DECEMBER 2015

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

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# AAO Calendar of Events



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

## 2016

January 1	New Year's Day—AAO office closed	March 16	AAO Board of Governors' meeting, 1 to 5 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida
January 1	Applications due for fellowship in the AAO	March 16	AAO Investment Committee's meeting, immediately following Board of Governors' meeting—Rosen Shingle Creek, Orlando, Florida
January 13	AAO Public Relations Task Force's teleconference, 9 p.m. Eastern time	March 17	AAO's annual business meeting and luncheon, 11:45 a.m. to 2:15 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida
January 14	Committee on Fellowship in the AAO's teleconference, 8:30 p.m. Eastern	March 18	AAO Postdoctoral Standards and Accreditation Committee's meeting, 12:30 to 2:30 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida
February 5-6	AAO Education Committee's meeting—AAO office—Indianapolis	March 18	AAO Publications Committee's meeting, 12:30 to 2:30 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida
February 12-14	<b>Clinically Coordinated Counterstrain</b> —William H. Devine, DO, course director—Midwestern University/Arizona College of Osteopathic Medicine in Glendale (This course is being supported in part by the AAO's Samuel V. Robuck Fund.)	March 18	AAO Postdoctoral Training Committee's meeting, 2:30 to 3:30 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida
March 12-15	Pre-Convocation course— <b>Evidence-Based Visceral Function and Dysfunction With 3D Anatomy</b> —Kenneth J. Lossing, DO, and Stefan Hagopian, DO, FAAO, course directors—Rosen Shingle Creek, Orlando, Florida	March 19	AAO Board of Trustees' meeting, 11 a.m. to 2 p.m. Eastern time—Rosen Shingle Creek, Orlando, Florida (also see March 16 listing)
March 13-15	Pre-Convocation course— <b>Brain 2: Brain Tissue, Nuclei, Fluid and Reticular Alarm System (RAS)</b> —Bruno J. Chikly, MD, DO (France), course director—Rosen Shingle Creek, Orlando, Florida	March 20	Post-Convocation—Residency Program Directors' Workshop—Michael P. Rowane, DO, FAAO, course director—Rosen Shingle Creek, Orlando, Florida
March 13-15	Pre-Convocation course— <b>Fascial Distortion Model: Treatment of the Upper Extremities, Lower Extremities, and Head Region</b> —Todd A. Capistrant, DO, MHA, course director—Rosen Shingle Creek, Orlando, Florida	April 29–May 1	<b>Fulford's Basic Percussion Hammer</b> —Richard W. Koss, DO, course director—University of North Texas Health Science Center Texas College of Osteopathic Medicine in Fort Worth
March 16-20	AAO Convocation— <b>Somatic Dysfunction and Emotional Well-being: An Osteopathic Approach to Mental Health</b> —Millicent King Channell, DO, FAAO, program chair—Rosen Shingle Creek, Orlando, Florida	June 16-19	<b>Introduction to Osteopathic Manipulative Medicine</b> —Lisa Ann DeStefano, DO, course director—University of North Texas Health Science Center Texas College of Osteopathic Medicine in Fort Worth (This course is being supported in part by the AAO's Samuel V. Robuck Fund.)
March 16	AAO Board of Trustees' meeting, 8 a.m. to noon Eastern time—Rosen Shingle Creek, Orlando, Florida (also see March 19 listing)		



# View From the Pyramids: Tolerance in Mind and Medicine

AAOJ Scientific Editor Brian E. Kaufman, DO, FACOI, FACP

In these times, we reach and pass through crossroads faster than we can choose a new route. As a result, conflict, intolerance, and fervor often determine the direction we take. We rigidly cling to our own points of view, choosing to remain deaf to new ideas and the perspectives of others.

In medicine and in our other leadership roles, we make choices that will define the future in fundamental and profound ways. How do we shape health insurance policy? Should we promote new regulations for direct-to-consumer marketing of pharmaceuticals? How do we care for refugees? What is a just response to terrorism? What does “gun control” mean? How do we solve food insecurity? Should physicians be accountable for patients’ choices? How ethical is physician-assisted suicide?

Although each of these issues is a jungle of thorns, we share our convictions about them openly on social media, at parties, at family gatherings, at medical conferences, and even with patients.

Having convictions is admirable. However, when coupled with intolerance, unshakeable convictions have the power to transform the best intentions into something toxic. This sort of thinking leads to bombing abortion clinics and the Boston Marathon. It also leads to more pedestrian demands, such as patients requesting antibiotics for viral illnesses, to many citizens denigrating the president’s status because they don’t agree with his policies, and nonphysician auditors denying medical claims.

Most of us are aware of our flaws and our mistakes, yet we persist in the bullheaded belief that our opinion is the only truth, even if our opinion conflicts with the virtues and rights we extol. Once we *know* something, we have filled our cup and have no room left for learning. Some of the greatest thinkers in art, music, literature, and philosophy have expressed the sentiment that the more they learned, the less they knew. If we accept this as a truth and extrapolate backward, we arrive at the following corollary: The more I know, the less I have learned.

**I never expect to see a perfect work from imperfect man.**

—Alexander Hamilton<sup>2</sup>

**O divine Master,  
Grant that I may not so much seek  
To be consoled as to console;  
To be understood as to understand;  
to be loved as to love.**

—From the Franciscan prayer<sup>1</sup>

Although tolerance is a simple concept, it is difficult to execute. If we downgrade our beliefs from the “right way” to “the best way we know right now,” we create space in our hearts and minds for other possibilities. If we seek first to understand and then to be understood as St Francis of Assisi wrote,<sup>1</sup> we end up learning about each other, our world, and our motivations. If every person holds to his or her beliefs yet respects, or even embraces, opposing views, we can move on from insisting we are right to finding true solutions.

If we approach each other with respect, disagreements lead to insights, differences become commonalities, and our foes become our allies. Such outcomes are possible only if our disagreements are with ideas, not with the people who espouse those ideas.

Going forward, we all must work harder to exercise tolerance. Doing so will make our communication and other interactions about religion—whether in the American Osteopathic Association’s House of Delegates or on social media, whether about the disease of addiction or those who treat victims of addiction—not only more pleasant but also more productive. Increased tolerance will even improve communication with our patients and colleagues, especially when they wrong us intentionally or accidentally.

Changing ourselves is never easy, but if we want meaningful progress, it is essential.



## Reference

1. Franciscan prayer. National Shrine of Saint Francis of Assisi website. <http://www.shrinesf.org/franciscan-prayer.html>. Accessed December 21, 2015.
2. Hamilton A. The Federalist No. 85. Constitution Society website. <http://www.constitution.org/fed/federa85.htm>. Accessed December 21, 2015. ■

# CLINICALLY COORDINATED COUNTERSTRAIN

Feb. 12-14, 2016 • **Midwestern University/Arizona College of Osteopathic Medicine in Glendale**

## Course Description

In this course, seven clinical innovators will teach attendees how to identify dysfunctions that can be corrected using counterstrain, a system of osteopathic diagnosis and treatment that uses opposite forces to relieve strain. In the process, the faculty members will demonstrate how they integrate counterstrain into clinical practice for both adult and pediatric patients.

Course faculty will present lectures and conduct workshops on applying counterstrain in the postural-biomechanical model, the respiratory-circulatory model and the neurological-autonomic model.

This course is supported in part by the AAO's Samuel V. Robuck Fund.

## Course Faculty

Led by course director William H. Devine, DO, the faculty will consist of John C. Glover, DO, FAAO; Christian Fossum, DO (Norway); Edward Keim Goering, DO; Michael L. Kuchera, DO, FAAO; G. Bradley Klock, DO, FAAO; and Paul R. Rennie, DO, FAAO

## Course Location

**Midwestern University/Arizona College of Osteopathic Medicine**  
Agave Hall, OMT Lab 101, 19555 N. 59th Ave., Glendale, AZ 85308

## Course Times

Friday and Saturday from 8 a.m. to 5:30 p.m.  
Sunday from 8 a.m. to noon

## Meal Information

Continental breakfast will be provided each day. Lunch will be provided on Friday and Saturday. Please contact the Academy with special dietary needs at (317) 879-1881, ext. 220, or [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org).

## Continuing Medical Education

20 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Travel Arrangements

Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or [globallyyourstravel@cox.net](mailto:globallyyourstravel@cox.net).

## Course Director

An internationally recognized educator, **William H. Devine, DO**, is a 1970 graduate of what is now the Kansas City University College of Osteopathic Medicine in Missouri.

Since 1996, Dr. Devine has been a professor of osteopathic manipulative medicine at the Midwestern University/Arizona College of Osteopathic Medicine (MWU/AZCOM) in Glendale, which he also serves as the director of postgraduate osteopathic manipulative medicine, the director of the musculoskeletal medicine residency and the coordinator of the osteopathic specialty clinic. He is board certified in osteopathic manipulative medicine and neuromusculoskeletal medicine and in osteopathic family medicine.

Dr. Devine serves on boards and committees for national, state and local organizations. He is the president of the Arizona Academy of Osteopathy, and he currently is serving his second stint on the American Academy of Osteopathy's Board of Governors. He has served on the national AAO's Education Committee since 2010.



Registration Fees	By Jan. 11, 2016	After Jan. 11, 2016
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# Rising to New Challenges: Problems and Proposed Solutions for Osteopathic Program Directors

**Stephen I. Goldman, DO, FAAO, FAOASM**

## **Introduction**

The single accreditation system for graduate medical education (GME) presents unique challenges to osteopathic residency programs. Maintaining osteopathic identity, evaluating the concept of osteopathic recognition, conducting osteopathically focused research, and implementing new concepts for teaching osteopathic manipulative medicine (OMM) in osteopathic medical schools are topics that must be addressed by undergraduate and graduate medical education programs. The author outlines these challenges and presents concepts for changing the focus of and training in osteopathic residency programs and undergraduate OMM education.

## **Maintaining Osteopathic Identity**

“May you live in interesting times.” So goes the apocryphal Chinese curse.

Indeed, we live in the most interesting times our profession has seen in more than 50 years. The single GME-accreditation system, which is combining the governing institutions for residency training in allopathic and osteopathic medicine under the auspices of the Accreditation Council for Graduate Medical Education (ACGME), promises to preserve our unique osteopathic heritage while simultaneously blending our GME programs with those of the ACGME. Nearly every specialty college in the osteopathic medical profession and every osteopathic residency program are debating how they can—and even whether they should—maintain their osteopathic identity.

## **Training**

I will try to address the concerns about osteopathic residency training in this new era, and I will try to offer ideas for navigating the single GME-accreditation system. These suggestions are based on my experience serving as a residency director for more than 12 years for both a Plus One program in neuromusculoskeletal medicine (NMM) and an integrated residency for family medicine and NMM. Thus my viewpoint is skewed toward the academic, and my suggestions are primarily directed toward those who train osteopathic residents and osteopathic medical students.

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Stephen I. Goldman, DO, FAAO, FAOASM, has directed the integrated family medicine and neuromusculoskeletal medicine residency program at what is now Beaumont Hospital–Farmington Hills in Michigan since 2002. He is board certified in osteopathic manipulative medicine and neuromusculoskeletal medicine (OMM-NMM), in osteopathic family medicine, and in osteopathic sports medicine.

Dr Goldman served on the Academy’s Postdoctoral Standards and Evaluation Committee from 2009 until 2015, when it was split into the Postdoctoral Training Committee and the Postdoctoral Standards and Accreditation Committee. Dr Goldman serves on both newly formed committees.

In addition, Dr Goldman is a fellow of both the American Academy of Osteopathy and the American Osteopathic Academy of Sports Medicine.

For more than 20 years, Dr Goldman has operated a private practice in Novi, Michigan, at which he focuses on OMM and sports medicine. He is a member of US Figure Skating’s Research and Education Committee of Sports Science and Medicine, and he has worked with figure skaters at all levels.

Financial and other disclosures: No financial disclosures reported. Dr Goldman serves on the AAO Publications Committee, which oversees the AAOJ.

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As the single accreditation system is being developed, osteopathic residency training has become incredibly complicated. Even though my own hospital—Beaumont Hospital—Farmington Hills in Michigan (formerly Botsford Hospital)—is one of the leading osteopathic educational centers in the country, its directors of osteopathic residencies are debating whether to seek osteopathic recognition for their programs. In their minds, they have enough to do to prepare their programs for the ACGME world.

The main issue for them is that osteopathic specialty colleges and the ACGME Osteopathic Principles Committee have not provided enough guidance on how osteopathic principles should blend into osteopathic-recognized ACGME-accredited residency programs. Additionally, there is no consensus on the feasibility of incorporating osteopathic principles into those programs because most of them currently lack a comprehensive component of osteopathic principles and practice as applied in the hospital setting.

Even though osteopathic medical students are well educated in how to employ OMM in the outpatient setting, they have little knowledge of how to use palpatory diagnosis and osteopathic manipulative treatment in the hospital setting. In my experience

### Differences Defined Between OMM and OMT

For the purposes of this article, distinctions are made between the terms *osteopathic manipulative medicine* and *osteopathic manipulative treatment* based on the definitions below from the *Glossary of Osteopathic Terminology*:

- **osteopathic manipulative medicine (OMM):** The application of osteopathic philosophy, structural diagnosis and use of OMT in the diagnosis and management of the patient.
- **osteopathic manipulative treatment (OMT):** The therapeutic application of manually guided forces by an osteopathic physician (US usage) to improve physiologic function and/or support homeostasis that has been altered by somatic dysfunction. OMT employs a variety of techniques.

For more information on the terminology used in *The AAO Journal*, see the [Glossary of Osteopathic Terminology](#), which is developed and updated by the American Association of Colleges of Osteopathic Medicine's Educational Council on Osteopathic Principles.

and in my discussions with physicians who are responsible for inpatient OMM services, most third-year osteopathic medical students sorely lack the diagnostic and treatment skills for treating hospital patients. This lack of knowledge and the resulting lack of confidence cause students to abandon their OMM skills during their third and fourth years of osteopathic medical school, during which they spend the vast majority of their time training in hospitals. This lack of interest then extends into the residency years. With fewer and fewer residents interested in OMM, many osteopathic residency directors are doubting whether they should bother seeking osteopathic recognition for their programs.

### Emphasizing Research

Program directors of osteopathic residencies are already under pressure to generate research related to osteopathic theory and practice, and this pressure will be magnified in the ACGME world. Complicating such research efforts is that the evidence-based research model does not work for OMM: The model is designed for research in fields that generate exactly measured values and outcomes. So program directors of osteopathic residencies try to help their residents prepare research projects, findings and manuscripts to fit a model that does not take into account the difference of our philosophy.

### Who Are We?

Faced with these paradoxes, all of us in osteopathic GME have to answer the following questions:

- What are we preserving?
- Will anything “osteopathic” be left for students in the future?
- Will OMM become another forgotten piece of medical history, such as magnetism and spiritualism?

In spite of all the historical debates, we continue to treat and approach our patients differently than do our allopathic counterparts. Even the MDs in my large hospital system acknowledge a difference in how DOs teach students and how we treat our patients. Most important, my MD colleagues are not just noticing a difference in the type of treatment we use, but they are also noticing how *osteopathic philosophy* differs from their underlying philosophy. MDs want to know more about osteopathic philosophy and osteopathic manipulative treatment (OMT). MDs want to know how OMM affects patient outcomes, how we employ OMM, and even how OMM affects the bottom line.

Even though it is more than 140 years since Andrew Taylor Still, MD, DO, raised the “banner of osteopathy,” the same questions arise: How are DOs different? How do we continue to teach and

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demonstrate this difference? And how do we, as osteopathic physicians, define ourselves?

### Evaluating Osteopathic Recognition

As an osteopathic residency program director, I propose 4 ideas for changing our perspective on osteopathic recognition and adjusting undergraduate osteopathic medical education to address inpatient medicine.

First, osteopathic physicians need to acknowledge that our world is changing. Our old model of training is ending, and something new is emerging. We should recognize that not every DO will practice osteopathic manipulation and that some DOs will practice as allopaths who simply have DO degrees. While Dr Still not too fondly called those who blended medicine and osteopathy “mixers,” we have to realize that in the 21st century, we are all mixers. Some of us are just more osteopathically focused than others.

Second, let us take this opportunity to redefine osteopathic residencies. Our residency programs should be viewed as falling into 2 main groups: those in osteopathic neuromusculoskeletal medicine (ONMM) and those in other specialties. The American Academy of Osteopathy—with support from the American College of Osteopathic Family Physicians and the American Osteopathic

Association—is encouraging NMM residencies to continue to train residents by becoming accredited by the ACGME. Truly, our ONMM residents are our future teaching faculty for undergraduate and graduate medical education. Most important, we must be sure to train these residents in osteopathic philosophy, not just OMT. We need to train them in a way that they understand why osteopathic diagnosis is important and how it is made. We must continue teaching residents to look for health and to search for the cause of illness.

For other osteopathic-recognized residency programs, *osteopathic thinking* should be as much the focus as OMT. ONMM program directors should position themselves to guide other program directors in recognizing the importance of achieving this goal. We must also work with the ACGME’s review committees and with osteopathic specialty colleges to ensure that residents are trained in both osteopathic philosophy and OMT.

Most osteopathic specialists, even many family physicians, elect not to use OMT. However, if we continue to train all osteopathic specialists to *view patients from an osteopathic perspective*, to look for the cause of disease instead of treating the symptoms, and to see the whole person instead of the disease, we will succeed in preserving

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(continued from page 9)

OMM. These lessons may truly be the gifts that we give our allopathic colleagues. After all, isn't that the kind of care patients want from their physicians?

### Osteopathic Medical Research

Third, the quest for osteopathic medical research must go forward. As our residents train in dual osteopathic and allopathic programs, we should employ the grant-writing and research talents of our allopathic colleagues to help us design, fund and implement research based on osteopathic principles. Let us, for example, measure patient outcomes, satisfaction scores and early ambulation scores. Studies should be designed to evaluate the accuracy of structural diagnoses and the efficacy of OMT for patients with specific disease states. These topics are important for osteopathic medicine and the rest of medicine.

#### Academy Proposes Prerequisites for ACGME's Osteopathic Residencies

Since late September, the American Academy of Osteopathy has taken 2 steps to offer guidance to the Accreditation Council for Graduate Medical Education (ACGME) regarding the single accreditation system for graduate medical education (GME).

First, the Academy issued a position paper on the baseline knowledge for entering osteopathic-recognized residencies, which was published in the September issue of *The AAO Journal*. Titled "[Recommended Knowledge Base for Entering ACGME Residencies With Osteopathic Recognition](#)," the position paper outlines 22 areas of didactic and practical education that the Academy believes are essential for both DOs and MDs before they enter osteopathic-recognized residencies in any specialty.

Second, the [Academy submitted comments](#) to the ACGME Review Committee on Osteopathic Neuromusculoskeletal Medicine (ONMM) on the ACGME's second iteration of program requirements for what are currently Plus One residencies. Although the Academy is pleased with a number of changes that the review committee made, the AAO's comments outline concerns with some of the prerequisites to entering Plus One training. The Academy is especially opposed to ACGME provisions that would call for all ONMM-related training during residents' first GME programs to be supervised by physicians certified by the American Osteopathic Board of Neuromusculoskeletal Medicine.

While we train our residents in critically analyzing every single intricacy of every single peer-reviewed article published on osteopathic research projects, we should admit that we just don't know how to fit our medical model into evidence-based medicine. In evaluating emerging osteopathic literature, we should emphasize to osteopathic residents that in addition to focusing on analyzing statistics and study designs, they should consider how to improve the studies' topics and designs. In that way, we will encourage residents to become more creative and exacting in designing their own research projects.

### Inpatient Training

Fourth, education on applying OMM to hospitalized patients is sorely lacking in osteopathic medical schools. Educating second-year students on how to employ osteopathic philosophy, palpation diagnosis, and OMT in the inpatient setting would greatly increase the chance that students choose to use this valuable set of skills during the rest of medical school and throughout their residencies. The odds that students would use these skills could be further increased by reinforcing inpatient OMM education through ongoing educational sessions in hospitals during the students' third and fourth years and during their residencies.

### Conclusion

The debate over what is truly osteopathic education and practice goes back to our profession's very first school, which was founded by Dr Still. If you are not familiar with the early history of osteopathic medicine and the battles over whether to include allopathic topics in osteopathic medical schools, I encourage you to read *A. T. Still: From the Dry Bone to the Living Man*, an incredible biography about our profession's founder written by John R. Lewis, BSc Ost Med (Honors), MSCCO, and *The DOs: Osteopathic Medicine in America* by Norman Gevitz, PhD. You need to know that this debate is nothing new and that it is at the very core of our profession.

As osteopathic medicine moves forward in the 21st century, it is my hope that the ideas in this article will stimulate thought and discussion among my osteopathic colleagues on how to address the challenges facing osteopathic residencies in the single GME-accreditation system. Realizing that not all osteopathic physicians will employ OMM, redefining the focus of our residencies in both ONMM and other specialties, placing greater emphasis on osteopathic medical research, continuing to emphasize osteopathic philosophy, and reformulating OMM education in osteopathic medical schools to include inpatient care will allow us to move into a new, undefined future for osteopathic medicine. ■

# PRE-CONVOCATION—FASCIAL DISTORTION MODEL: TREATMENT OF THE UPPER EXTREMITIES, LOWER EXTREMITIES AND HEAD REGION

March 13-15, 2016 • Rosen Shingle Creek in Orlando, Florida

## Course Description

While providing a solid foundation in the fascial distortion model (FDM), Todd A. Capistrant, DO, MHA, will lead attendees in exploring the FDM in relation to headaches and temporomandibular joint disorders, and he will address the FDM's role in treating patients with upper and lower extremity injuries such as epicondylitis, carpal tunnel syndrome, Osgood-Schlatter disease, Achilles tendonitis and plantar fasciitis.

Techniques used in the course will include high-velocity, low-amplitude thrust; counterstrain; balanced ligamentous tension; and osteopathic cranial manipulative medicine.

Although this is the third module in the Academy's FDM series, it is not necessary to have taken the first or second module.

## Course Times

Sunday through Tuesday from 8 a.m. to 6 p.m.  
Breakfast and lunch are on your own. Coffee will be provided.

## Continuing Medical Education

24 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Course Location

### Rosen Shingle Creek

9939 Universal Blvd., Orlando, FL 32819-8701  
Stay at Rosen Shingle Creek for as little as \$199 per night.  
Make your reservations [online](#), or call (866) 996-6338.  
Mention the AAO's Convocation to get the best rate.

## Travel Arrangements

Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or [globallyyourstravel@cox.net](mailto:globallyyourstravel@cox.net).

## Course Director

**Todd A. Capistrant, DO, MHA**, earned both his doctor of osteopathic medicine degree and his master in health administration degree in 1997 from the Des Moines University College of Osteopathic Medicine in Iowa. He is one of only three physicians in the United States who are currently certified to teach seminars on the FDM, and he is the 2015-16 president of the American Fascial Distortion Model Association.



Dr. Capistrant specializes in osteopathic manipulative medicine (OMM), and he is certified by the American Board of Family Medicine. He is a member of the growing OMM department at the Tanana Valley Clinic in Fairbanks, Alaska, and he serves as a regional dean for the Pacific Northwest University of Health Sciences, College of Osteopathic Medicine in Yakima, Washington. He enjoys working with athletes to maximize performance and with pregnant women to relieve pain.

Registration Fees	On or before Jan. 11, 2016		After Jan. 11, 2016	
	With Convo	Without Convo	With Convo	Without Convo
<i>Save 10% when you register for the AAO's 2016 Convocation.</i>				
Academy member in practice*	\$918	\$1,020	\$1,098	\$1,220
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Nonmember practicing DO or other health care professional	\$1,098	\$1,220	\$1,278	\$1,420
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\* The AAO's associate members, international affiliates and supporter members are entitled to register at the same fees as full members.

## Registration Form

**Pre-Convocation Course—Fascial Distortion Model:  
Treatment of the Upper Extremities, Lower Extremities and Head Region  
March 13-15, 2016**

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# Effect of Select Osteopathic Manipulative Treatment Techniques on Patients With Acute Rhinosinusitis

Yumie Nishida, DO; Mason M. Sopchak, DO; Matthew R. Jackson, DO; Theresa R. Andersonning, DO; Eric P. Leikert, DO; Stephen I. Goldman, DO, FAAO, FAOASM; and Robert W. Jarski, PhD

## Abstract

**Context:** Osteopathic manipulative treatment (OMT) is used to promote recovery from rhinosinusitis by improving the arterial, venous, and lymphatic flow in affected areas, but few studies have investigated the efficacy of select OMT techniques for enhancing recovery from acute rhinosinusitis.

**Objective:** This prospective, randomized, controlled pilot study investigated whether the use of select OMT techniques in conjunction with conventional medical treatment for acute rhinosinusitis decreases the duration and severity of symptoms compared with standard medical care alone.

**Methods:** Subjects were randomly assigned to an intervention group (n=6) or a control group (n=11). Subjects in the intervention group received select OMT techniques in addition to the conventional medical evaluation and treatment that would be provided in a typical family practice. Subjects in the control group received only conventional medical evaluation and treatment. The subjects in the control group rated their symptoms using the standardized 5-point scale Sino-Nasal Outcome Test at the end of their office encounter on day 1 and again on days 3 and 6. Subjects in the intervention group rated their symptoms using the same scale before and after treatment on day 1 and again on days 3 and 6.

**Results:** The results of this pilot study demonstrated a trend toward reduced clinical symptoms of rhinosinusitis and faster improvement in subjects who received select OMT techniques, but these changes were not statistically significant.

**Conclusion:** This pilot study did not demonstrate a statistically significant reduction in individual symptoms of rhinosinusitis among patients who were treated with select OMT techniques. This may be attributable to the small cohort for this study or to the ineffectiveness of OMT. Because very few studies have reported the results of using select OMT techniques on patients with rhinosinusitis, the methods presented in this report should benefit future investigators, and cumulative data from this and other studies should be used in future meta-analyses.

From Beaumont Hospital–Farmington Hills (formerly Botsford Hospital) in Michigan (Nishida, Sopchak, Jackson, Andersonning, Leikert and Goldman); Novi Center for Manipulative and Sports Medicine in Novi, Michigan (Goldman); and Oakland University School of Health Sciences in Rochester, Michigan (Jarski).

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## Introduction

Rhinosinusitis is an inflammatory condition that affects the 4 paired sinuses of the nasal cavity and the nasal cavity itself. The term *rhinosinusitis* is preferred to *sinusitis* because inflammation of the sinuses rarely occurs without concurrent inflammation of the nasal mucosa.<sup>1</sup> Each sinus is lined with respiratory epithelia that produce mucus that is transported via cilia to the ostium and subsequently into the nasal cavity. The sinuses are more likely to get infected when inflammation of the nasal cavity creates obstruction.

Rhinosinusitis is classified into 3 groups: acute, subacute, and chronic. *Acute rhinosinusitis* is defined as rhinosinusitis lasting no more than 4 weeks; *subacute rhinosinusitis*, more than 4 weeks but less than 12 weeks; and *chronic rhinosinusitis*, 12 weeks and longer.<sup>2,3</sup> This study focused only on acute rhinosinusitis.

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The following symptoms are used to diagnose rhinosinusitis: nasal drainage, nasal congestion, and facial pain or pressure. Although thick, purulent or discolored nasal discharge is often thought to indicate bacterial sinusitis, this symptom is not specific to bacterial infections as it also occurs early in viral infections. The diagnosis of rhinosinusitis is further supported by secondary symptoms, including anosmia, ear fullness, cough, sneezing, and headache.<sup>2,4</sup>

In providing osteopathic manipulative treatment (OMT), osteopathic physicians use manual forces to improve physiologic function or to restore homeostasis that has been altered by somatic dysfunction. *Somatic dysfunction*, defined as impaired or altered function of related components of the somatic system, affects skeletal, arthroal, and myofascial structures and their related vascular, lymphatic, and neural elements.<sup>5,6</sup> Osteopathic physicians apply osteopathic philosophy, structural diagnosis, and OMT when diagnosing and treating patients. A variety of OMT techniques are used to tailor care to a patient's individual needs.

For patients with rhinosinusitis, OMT is used to promote recovery by improving the arterial, venous, and lymphatic flow of affected areas.<sup>7,8</sup> However, few studies have investigated the efficacy of OMT for enhancing recovery from acute rhinosinusitis. Many articles related to the efficacy of OMT for patients with rhinosinusitis are outdated, while others are case studies or they focus on chronic sinusitis.<sup>7</sup> A search of the literature revealed no major randomized, controlled studies on acute rhinosinusitis.

This pilot study investigated the hypothesis that OMT provides faster recovery and symptom relief when used in conjunction with the standard-of-care treatment provided in outpatient family medicine settings. The null hypothesis stated that the selected OMT techniques do not provide significant relief from symptoms and do not affect recovery time.

## Methods

This prospective, randomized, controlled pilot trial was conducted from January 1, 2012, through June 30, 2013, at 2 family medicine residency training clinics. Both clinics were affiliated with Botsford Hospital (now Beaumont Hospital–Farmington Hills), an osteopathic community medical facility in Farmington Hills, Michigan. The clinics are located in Farmington and Redford Township, Michigan. Botsford Hospital's institutional review board granted approval for the study.

During the research period, all patients who saw residents at the family medicine residency training clinics were screened for the primary diagnosis of acute rhinosinusitis. If they were not excluded on initial screening based on the criteria shown in *Table 1*, patients

were recruited to participate in the research and written informed consent was obtained. Subjects were then randomized into 2 groups: One group received conventional medical treatment only (control group), and the other received OMT in conjunction with conventional treatment (OMT group). The random assignment was blinded by using envelopes that contained numbered cards: 1 for the control group or 2 for the OMT group.

Acute rhinosinusitis can be accurately diagnosed based on clinical findings such as runny nose, cough, and ear pain. Radiographs, computerized axial tomography, and magnetic resonance imaging are not recommended unless a complication or alternative diagnosis is suspected.<sup>9,10</sup> Culture of the nasal cavity or of purulent discharge also does not yield reliable diagnoses. Therefore, imaging studies and cultures were not performed unless they were clinically indicated.

Subjects in the control group received only conventional medical evaluation and treatment, and subjects in the OMT group received select OMT techniques in addition to conventional medical evaluation and treatment. Patients in the control group were asked to rate their symptoms using the 5-point Sino-Nasal Outcome Test (SNOT)<sup>11</sup> at the end of their office encounter (day 1). The symptoms assessed by SNOT are runny nose, cough, postnasal drip, thick nasal drip, ear pain, dental pain, facial pain, facial pressure, ear pressure, and headache. Because conventional care is not

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**Table 1.** The following exclusion criteria were used for the research protocol.

- 17 years old or younger
- Known pregnancy
- Treatment by a health care professional for acute rhinosinusitis in the past 3 months
- Determined unable to complete the process (eg, no contact telephone number)
- Began participating but wished to withdraw from the study
- Assigned to the control group but requested OMT, or assigned to the OMT group but refused to receive OMT
- Subacute or chronic condition
- Unstable or critical condition that needed immediate medical attention, including unstable vital signs, mastoiditis, and any suspected intracranial lesion
- Previous surgery pertinent to rhinosinusitis (eg, surgery for deviated septum) except tonsillectomy, and adenoidectomy
- Assigned to OMT group but suspected to have carcinoma or fracture in a body region to be treated
- Had previous experience with complementary medicine provided by health care professionals (eg, osteopathic, chiropractic, or acupuncture treatment)\*

\*This criterion was required by the institutional review board.

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expected to produce immediate changes, only 1 SNOT evaluation was obtained for control group subjects on day 1.

Patients in the OMT group were asked to rate their symptoms using SNOT before and after receiving OMT on day 1.

SNOT scores were obtained from patients in both groups using follow-up telephone calls on days 3 and 6. There were no follow-up office visits during this study.

### **Participating Physicians**

The participating researchers were resident physicians in the integrated family practice and neuromusculoskeletal medicine (FP-NMM) residency program. OMT was provided only by the FP-NMM residents, but residents in Botsford's family practice residency program aided in collecting data and making follow-up telephone calls.

### **OMT Standardization**

Somatic dysfunctions of the cranial, cervical, thoracic, and 6-upper-rib regions were diagnosed, and all subjects in the OMT group received 3 standardized treatments described in the OMT protocol for this study. All of the FP-NMM residents who performed OMT on the study participants underwent a 2-hour training session supervised by an attending physician who is board certified in neuromusculoskeletal medicine. The training session involved teaching the standardized OMT techniques described below.

### **Treatment Protocol**

All of the subjects in the OMT group were first evaluated for somatic dysfunction in the cranial, cervical, thoracic, and rib regions. The subjects then received OMT with the Still technique or myofascial release for the specific somatic dysfunctions found during the structural examination. Descriptions of Still technique and myofascial release can be found in standard osteopathic textbooks.<sup>12,13</sup>

The subjects in the OMT group then received 3 standardized treatments that are commonly used for patients with sinusitis disorders. The duration of each OMT session was 5 to 15 minutes. The subjects were treated in a sitting or supine position.

The 3 specific OMT techniques chosen for the protocol and the core issues of acute rhinosinusitis they address are as follows: *Thoracic inlet myofascial release* promotes lymphatic flow and mobilization, which are essential for resolving infection. *Supraorbital and infraorbital nerve release* and *suboccipital decompression* aid in interrupting the viscerosomatic reflexes that are responsible for many of the symptoms experienced during this particular illness. In addi-

tion, suboccipital decompression helps to balance the autonomic reflexes, specifically parasympathetic innervation (vagus nerve), to decrease rhinosinusitis drainage and nasal mucosa edema.

### **Thoracic Inlet Myofascial Release**

For this OMT technique, the physician sits or stands at the head of the table, placing his or her hands over the thoracic inlet with thumbs positioned posteriorly over the first ribs and fingers positioned anteriorly over the clavicle. The operator uses passive motion testing on the thoracic inlet by holding the tissues in a position of greatest relaxation, or ease, until release of the thoracic inlet is palpated. Patient respiration is used to assist the release. The thoracic inlet is taken into ease of motion on the exhalation phase of breathing. This treatment is repeated for two to three respiratory cycles until release of the thoracic inlet occurs.

### **Supraorbital and Infraorbital Nerve Release**

For supraorbital and infraorbital nerve release, the physician sits or stands at the head of the table or in front of the patient, respectively. The tips of the physician's index fingers or thumbs are placed on the supraorbital foramen along the supraorbital ridge. Fascia is tested for its directional motion preference, and the tissues are taken to a position of ease and held until release is felt, which takes 5 to 10 seconds. These steps are repeated for the infraorbital foramen. Each set of foramina, 2 supraorbital foramina and 2 infraorbital foramina, is treated as a pair.

### **Suboccipital Decompression**

For suboccipital decompression, the physician sits or stands at the head of the table, placing the tips of his or her fingers on the occipital condyles at the base of the patient's head. Lateral traction and cephalad traction are applied to decompress the atlanto-occipital joint.

### **Statistical Analysis**

Data were analyzed using *t* tests and one-way analysis of variance. The usual  $P < 0.05$  (two-tailed) was used throughout this study. Data analyses were performed using SPSS (version 14.0, SPSS Science Inc, Chicago, Illinois).

### **Results**

Characteristics of the 17 subjects (11 in the control group, 6 in the OMT group) are shown in *Table 2*. Collected characteristics included sex, ethnicity, smoking status, and age. Of 53 patients with a primary diagnosis of acute rhinosinusitis, 32 were excluded for having 1 or more of the criteria listed in *Table 1*, and 4 declined to participate. Seven control and 2 OMT subjects were lost to follow-up when researchers were unable to reach them by telephone

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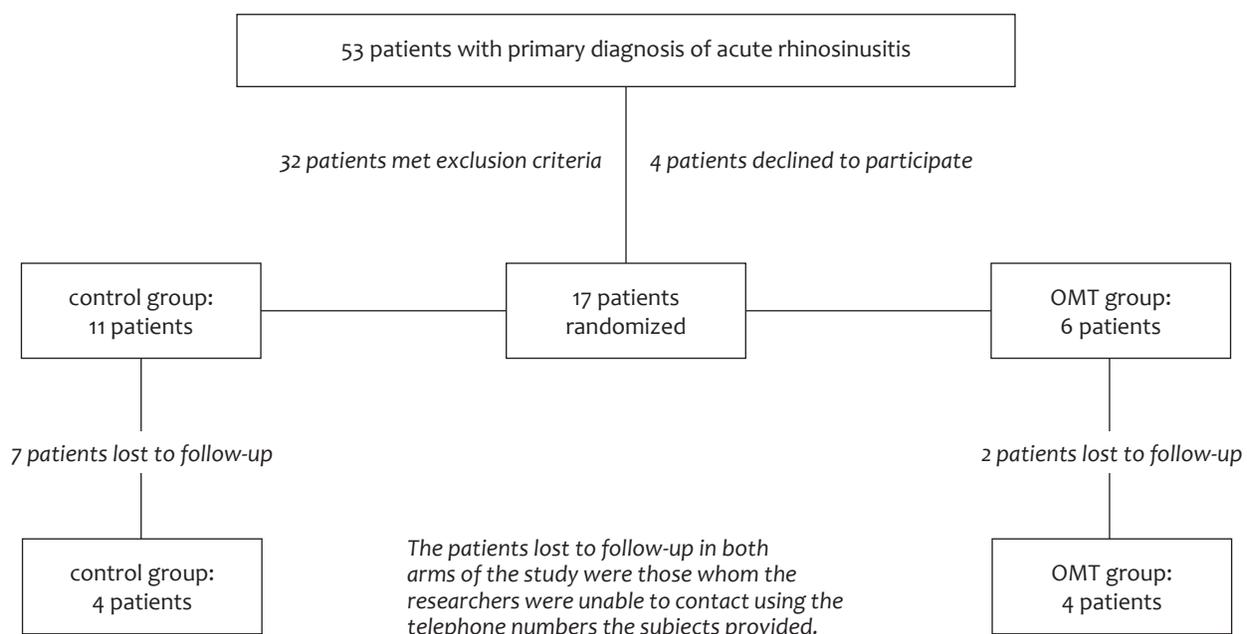
to gather day 3 or day 6 symptom scores. The flowchart of subjects is shown in the *Figure*.

SNOT uses a scale of 1 to 5 (1 being least severe, 5 being most severe) to assess 10 symptoms: runny nose, cough, postnasal drip, thick nasal drip, ear pain, dental pain, facial pain, facial pressure, ear pressure and headache. Therefore, the possible score range is 10 to 50.

Independent *t*-tests were used to evaluate the symptom score averages for the OMT group pre- and post-treatment on day 1; for the control group versus the OMT group pre-treatment on day 1; and for control versus OMT post-treatment on days 3 and 6.

The average symptom scores for control versus OMT pre-treatment on day 1 were 28.00 (SD=6.29) and 24.83 (SD=6.94), respectively ( $P=0.377$ ; control  $n=11$ ; pre-OMT  $n=6$ ). The average symptom scores for the OMT group pre- and post-treatment on day 1 were 24.83 (SD=6.94) and 21.42 (SD=5.61), respectively ( $P=0.373$ ,  $n=6$  for each group). The average symptom scores for control versus OMT post-treatment on day 3 were 23.63 (SD=3.54) and 15.75 (SD=5.19), respectively ( $P=0.054$ ,  $n=4$  for each group). The average symptom scores for control versus OMT post-treatment on day 6 were 14.50 (SD=3.00) and 12.50 (SD=1.91), respectively ( $P=0.31$ ,  $n=4$  for each group). (See *Tables 3-6*.)

**Figure.** Flowchart of subjects.



## Discussion

This pilot study was designed to evaluate select OMT techniques for improving symptoms of acute rhinosinusitis. The use of a standard treatment protocol ensured that all patients were treated with the same select OMT techniques for increasing sinus drainage through mechanical and neuroreflexive mechanisms.

The symptoms that showed the greatest improvement following OMT on day 1 were ear pressure, facial pressure, and thick nasal drip. While a trend toward improvement was found in patients

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**Table 2.** Demographic data from the randomized subjects.

	Control group	OMT group
<b>N</b>	11	6
<b>Female</b>	9	4
<b>Male</b>	2	2
<b>Caucasian</b>	9	4
<b>African American</b>	2	1
<b>Other race</b>	0	1
<b>Current smoker</b>	1	1
<b>Former smoker</b>	4	0
<b>Age (mean years)</b>	43.3	31.2

# INTRODUCTION TO OSTEOPATHIC MANIPULATIVE MEDICINE

**NEW DATE**

**June 16-19, 2016 • University of North Texas Health Science Center  
Texas College of Osteopathic Medicine in Fort Worth**

This is the first in a series of courses that the American Academy of Osteopathy (AAO) will be conducting to help MD students and graduates obtain the prerequisites for entering osteopathic-recognized residencies accredited by the Accreditation Council for Graduate Medical Education (ACGME). This course will also be valuable for DO and MD faculty in these residency programs.

In addition, osteopathic physicians who do not use osteopathic manipulative treatment (OMT) daily will find this course useful, as will other health care professionals with limited or no experience with manipulative techniques.

Through a combination of lectures and hands-on workshops, attendees will learn the basics of osteopathic manipulative medicine, which encompasses osteopathic tenets, palpatory diagnosis and OMT.

The curriculum includes lessons on muscle energy technique; thoracic spine technique; articular techniques; functional techniques; myofascial release; and high-velocity, low-amplitude thrust.

This course is supported in part by the AAO's Samuel V. Robuck Fund.

## Course Times

Thursday from noon to 6 p.m.

Friday, Saturday and Sunday from 8 a.m. to 5:30 p.m.

## Continuing Medical Education

28 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Meal Information

Lunch will be provided Thursday–Saturday. Breakfast will be provided Friday–Sunday. Please contact the Academy with special dietary needs at (317) 879-1881, ext. 220, or [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org).

## Course Location

**University of North Texas Health Science Center  
Texas College of Osteopathic Medicine**  
3500 Camp Bowie Blvd., Fort Worth, TX 76107



## Course Director

**Lisa Ann DeStefano, DO**, has chaired the Department of Osteopathic Manipulative Medicine at the Michigan State University College of Osteopathic Medicine (MSUCOM) in East Lansing since 2004. A protégé of the late Philip E. Greenman, DO, FAAODist, Dr. DeStefano edited the fourth edition of the

textbook *Greenman's Principles of Manual Medicine*.

A 1993 graduate of MSUCOM, Dr. DeStefano is board certified in osteopathic manipulative medicine and neuromusculoskeletal medicine and in osteopathic family medicine. In 2003, she received the Osteopathic Faculty Award and the Guiding Principles Award from MSUCOM. She has lectured widely in the United States and internationally.

## Travel Arrangements

Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or [globallyyourstravel@cox.net](mailto:globallyyourstravel@cox.net).

Registration Fees	Until April 16, 2016	April 17 through May 17, 2016	After May 17, 2016
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## Registration Form

### Introduction to Osteopathic Manipulative Medicine

**June 16-19, 2016**

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treated with OMT, the small cohort did not demonstrate statistically significant improvement in the treated arm of the study. It is estimated that future trials would require approximately 23 subjects per group to reach statistical significance.

The small sample size may be attributed to a few factors. First, 18 out of 53 potential subjects (34%) were excluded because they had previously received OMT or complementary medicine. Only 4 subjects were excluded based on other criteria listed in Table 1. Second, 10 potential subjects (19%) had sought care for acute rhinosinusitis from urgent care centers when Botsford's family medicine residency training clinics were closed. Third, 9 subjects (17%) were lost to follow-up. If researchers were unable to contact a subject on day 3, the subject was not called again. Four patients declined to

**Table 3.** Symptom mean scores for the control group (n=11) and the OMT group (n=6) before treatment on day 1. (SD=standard deviation)

Symptom	Control mean (SD)	Pre-OMT mean (SD)	P value
Runny nose	3.05 (1.39)	3.33 (1.17)	0.66
Cough	2.91 (1.39)	3.25 (1.08)	0.59
Postnasal drip	3.64 (1.36)	3.42 (1.02)	0.71
Thick nasal drip	2.95 (1.27)	2.83 (0.98)	0.83
Ear pain	2.18 (1.54)	2.00 (1.55)	0.82
Dental pain	1.64 (1.03)	1.50 (1.22)	0.82
Facial pain	2.55 (1.21)	1.83 (1.17)	0.26
Facial pressure	3.36 (1.12)	2.33 (1.51)	0.18
Ear pressure	3.00 (1.55)	2.83 (1.72)	0.85
Headache	2.73 (1.42)	1.50 (1.22)	0.09

**Table 5.** Symptom mean scores for control group (n=4) and OMT group (n=4) on day 3. (SD=standard deviation)

Symptom	Control mean (SD)	OMT mean (SD)	P value
Runny nose	2.37 (0.95)	1.50 (0.58)	0.19
Cough	3.38 (0.95)	2.25 (0.96)	0.16
Postnasal drip	3.63 (1.25)	1.75 (1.50)	0.11
Thick nasal drip	2.50 (1.29)	1.50 (1.00)	0.28
Ear pain	2.13 (1.93)	1.75 (1.50)	0.77
Dental pain	1.63 (1.25)	1.50 (1.00)	0.88
Facial pain	1.63 (0.75)	1.25 (0.50)	0.44
Facial pressure	2.38 (0.48)	1.25 (0.50)	0.02
Ear pressure	1.75 (0.50)	1.75 (0.96)	1.00
Headache	2.25 (1.50)	1.25 (0.50)	0.30

participate in the study, but improved patient education about the potential benefits of OMT may reduce that number in future studies.

This pilot study on OMT suggests some potentially helpful recommendations for future investigators. First, researchers studying the efficacy of OMT face inherent difficulties in establishing realistic inclusionary and exclusionary criteria regarding patients' prior use of complementary medicine. Investigations based on reliable data from 1998 through 2012 have demonstrated that 42% to 68% of adult Americans use some form of complementary medicine, and that percentage is increasing.<sup>14-16</sup> Because patients who use complementary medicine are becoming typical rather than unusual, excluding this major sector of the population is likely to result in

*(continued on page 18)*

**Table 4.** Symptom mean scores for the OMT group (n=6) pre- versus post-treatment on day 1. (SD=standard deviation)

Symptom	Pre-treatment mean (SD)	Post-treatment mean (SD)	P value
Runny nose	3.33 (1.17)	3.00 (1.41)	0.67
Cough	3.25 (1.08)	3.00 (0.89)	0.67
Postnasal drip	3.42 (1.02)	3.42 (1.36)	1.00
Thick nasal drip	2.83 (0.98)	2.33 (0.82)	0.36
Ear pain	2.00 (1.55)	1.83 (1.33)	0.85
Dental pain	1.50 (1.22)	1.33 (0.82)	0.79
Facial pain	1.83 (1.17)	1.67 (0.82)	0.78
Facial pressure	2.33 (1.51)	1.67 (0.82)	0.37
Ear pressure	2.83 (1.72)	2.00 (1.10)	0.35
Headache	1.50 (1.22)	1.17 (0.41)	0.55

**Table 6.** Symptom mean scores for control group (n=4) and OMT group (n=4) on day 6. (SD=standard deviation)

Symptom	Control mean (SD)	OMT mean (SD)	P value
Runny nose	1.25 (0.50)	1.75 (0.50)	0.21
Cough	2.38 (1.25)	1.75 (0.50)	0.42
Postnasal drip	1.63 (0.48)	1.50 (0.58)	0.75
Thick nasal drip	1.75 (0.96)	1.50 (1.00)	0.73
Ear pain	1.38 (0.75)	1.00 (0.00)	0.77
Dental pain	1.00 (0.00)	1.00 (0.00)	1.00
Facial pain	1.00 (0.00)	1.00 (0.00)	1.00
Facial pressure	1.50 (0.58)	1.00 (0.00)	1.00
Ear pressure	1.25 (0.50)	1.00 (0.00)	1.00
Headache	1.38 (0.48)	1.00 (0.00)	1.00

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### CONTINUING MEDICAL EDUCATION QUIZ

The purpose of the December 2015 quiz—found on page 21—is to provide a convenient means of self-assessing your comprehension of the scientific content in the article “Effect of Select Osteopathic Manipulative Treatment Techniques on Patients With Acute Rhinosinusitis” by Yumie Nishida, DO; Mason M. Sopchak, DO; Matthew R. Jackson, DO; Theresa R. Andersonning, DO; Eric P. Leikert, DO; Stephen I. Goldman, DO, FAAO, FAOASM; and Robert W. Jarski, PhD.

Be sure to answer each question in the quiz. The correct answers will be published in the next issue of the *AAOJ*.

To apply for 2 credits of AOA Category 2-B continuing medical education, fill out the form on page 21 and submit it to the American Academy of Osteopathy by May 31, 2016. The AAO will note that you submitted the form and forward your results to the American Osteopathic Association's Division of Continuing Medical Education for documentation.

You must score a 75% or higher on the quiz to receive CME credit.

*(continued from page 17)*

biased samples that do not represent patients who are typically seen in practice. Future studies may benefit from creating a study arm to investigate whether prior use of complementary medicine confounds data analyses.

Second, in addition to contacting research subjects by telephone for follow-up, creative methods that include email, social media, virtual clinical visits, and computerized systems should be used to help retain research subjects and generate follow-up data.

Third, electronic health records (EHRs) are becoming more commonplace, and they are facilitating medical research in new ways. With their increasing popularity, EHRs can be used to track data on subjects who would otherwise be lost to follow-up.

Finally, scientific investigation demands standardized protocols to increase statistical power and to decrease variability among methods and researchers, thus increasing reliability and external validity. One criticism of many OMT studies is that they allowed protocol variability. A strength of this study is its reliance on standardized OMT techniques. All FP-NMM residents who performed the select OMT techniques on the subjects underwent a 2-hour training session under the supervision of an attending physician board certified in neuromusculoskeletal medicine. This training, along with the study's standardized OMT protocol, minimized variations among the treating physicians, and it decreased measurement and statistical variability. However, the inexperience of the treating physicians may have played a role in the limited efficacy of the OMT protocol. In addition, real-world treatment with OMT does not follow standardized protocols. OMT is inherently designed to take into account the individual variations and needs of each patient.

The baseline characteristics of the control and OMT groups were not statistically significant. It should be noted that 13 of the 17 subjects (76.5%) were women, and 4 subjects in the control group were former smokers (23.5%) with unknown smoke-free durations. In addition, the mean age of the subjects in the control group was 12 years older than that of the subjects in the OMT group.

Although our results demonstrated no statistically significant differences between the study groups, the OMT group had trends toward earlier improvement in clinical symptoms and a more rapid decline in symptom scores. It is possible that statistical significance would have been more pronounced had more subjects participated in the study.

Another limitation of this pilot study was the variability of conventional medical treatment. Antibiotics, antihistamines, and

*(continued on page 20)*

# PRE-CONVOCATION—EVIDENCE-BASED VISCERAL FUNCTION AND DYSFUNCTION WITH 3-D ANATOMY

March 12-15, 2016 • Rosen Shingle Creek in Orlando, Florida

## Course Description

During this four-day course, attendees of all experience levels will learn techniques for palpating, diagnosing and treating patients with a variety of visceral dysfunctions.

Because radiology is limited to two dimensions, such standard detection methods as magnetic resonance imaging, computed tomography, ultrasound, X-ray and fluoroscopy have limited usefulness in detecting visceral dysfunctions, which are three-dimensional. Osteopathic research conducted in England, France and Germany during the last 20 years provides a basis for knowing what is normal, what is common, and what is pathological in the viscera. Studies are just beginning to cross-correlate osteopathic diagnosis, medical diagnosis, ultrasound diagnosis, symptoms and post-treatment evaluation.

Attendees will learn how to diagnose and relieve dysfunctions in the thorax, abdomen and pelvis using motion testing, motility, arterial and venous systems, neurological systems, the lymphatic system and emotional connections.

## Course Times

Saturday through Tuesday from 8 a.m. to 5:30 p.m. Breakfast and lunch are on your own. Coffee will be provided.

## Continuing Medical Education

32 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Course Location

### Rosen Shingle Creek

9939 Universal Blvd., Orlando, FL 32819-8701

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## Course Directors

**Kenneth J. Lossing, DO**, has been studying visceral manipulation with Jean-Pierre Barral, DO (France), for 30 years. An internationally recognized lecturer, Dr. Lossing contributed to the second and third editions of the American Osteopathic Association's *Foundations of Osteopathic Medicine* textbook.



As the Academy's 2014-15 president, Dr. Lossing starred in a [two-minute video segment](#) of "American Health Front!" that focused on osteopathic manipulative medicine.



An AAO trustee, **Stefan Hagopian, DO, FAAO**, has been teaching at universities and in continuing medical education courses while maintaining a private practice in osteopathic manipulative medicine in Santa Monica, California, for 23 years.

With the late Herbert C. Miller, DO, FAAO, FCA, Dr. Hagopian taught anatomically focused courses on the complex conditions of the human body, and he assisted Viola M. Frymann, MB, DO, FAADist, FCA, with her courses based on the teachings of William Garner Sutherland, DO. Dr. Hagopian also taught in study groups formatted after those of the late Anne L. Wales, DO, and he has served on the faculty for the unique biodynamic phases curriculum designed by James S. Jealous, DO.

## Registration Fees

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Nonmember resident or intern	\$806	\$896	\$986	\$1,096

\* The AAO's associate members, international affiliates and supporter members are entitled to register at the same fees as full members.

## Registration Form

### Pre-Convocation Course—Evidence-Based Visceral Function and Dysfunction With 3-D Anatomy

March 12-15, 2016

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(continued from page 18)

topical corticosteroids could have affected the outcome measures. However, it was decided not to exclude the use of antibiotics, antihistamines, or corticosteroids because this would further reduce the number of subjects and the statistical power of the study.

## Conclusion

Although there was a trend toward a reduction in symptoms of rhinosinusitis with the adjunctive use of select OMT techniques, this pilot study demonstrated no statistically significant reduction in symptoms in the OMT group compared with the control group. However, the methodology used in this pilot should promote and improve future OMT studies.

Based on observations from the current pilot study, suggestions for expanding OMT research include using more discretionary exclusion criteria, adhering to a standardized OMT protocol, and improving follow-up procedures by employing modern technology so that fewer data are lost to follow-up.

Generating data, even in pilot studies such as the current one, will make future meta-analyses possible, and such pilot studies provide an increasing body of evidence that can be used by clinicians.

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(continued on page 30)

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The Midwestern University Chicago College of Osteopathic Medicine, located in Downers Grove, Illinois, a suburb of the greater Chicago area, is seeking a full-time faculty member for the Department of Osteopathic Manipulative Medicine (OMM). The OMM Department provides a strong foundational knowledge of musculoskeletal medicine through its four-year curriculum as well as its post-doctoral programs. The OMM department at CCOM has established core faculty members, a comprehensive symptom-presentation curriculum, strong leadership, and robust research activity. This full time faculty member will assist the department chair and oversee the pre-doctoral education as presented in years 1-4, assist with the post-doctoral integration of OMM, and work with the student scholars mentoring their research pursuits. Candidates must possess a Doctor of Osteopathic Medicine degree from a COCA-accredited college of osteopathic medicine and be board certified. Neuromusculoskeletal medicine certification is desirable, but not required. The successful candidate will have proven clinical, faculty and administrative experience.

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## CONTINUING MEDICAL EDUCATION

This CME Certification of Home Study is intended to document your review of the CME article in this issue of *The AAO Journal* under the criteria for AOA Category 2-B continuing medical education credit.

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This is to certify that I, \_\_\_\_\_,  
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read the following article for AOA CME credit.

**Name of article:** "Effect of Select Osteopathic Manipulative Treatment Techniques on Patients With Acute Rhinosinusitis"

**Authors:** Yumie Nishida, DO; Mason M. Sopchak, DO; Matthew R. Jackson, DO; Theresa R. Andersonning, DO; Eric P. Leikert, DO; Stephen I. Goldman, DO, FAAO, FAOASM; and Robert W. Jarski, PhD

**Publication:** *The AAO Journal*, Vol. 25, No. 3, December 2015, pages 12-20, 30

AOA Category 2-B credit may be granted for this article.

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Complete the quiz to the right by circling the correct answers. Send your completed answer sheet to the American Academy of Osteopathy by May 31, 2016. The AAO will forward your results to the American Osteopathic Association. You must answer 75% of the quiz questions correctly to receive CME credit.

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- Which of the following is a sensitive sign of sinusitis?
  - thick, purulent, or discolored nasal discharge
  - fever, chills, and night sweats
  - facial pressure in the maxillary but not the frontal distribution
  - none of the above
- Among the 10 symptoms measured by the 5-point Sino-Nasal Outcome Test is:
  - dental pain
  - ear pressure
  - headache
  - runny nose
  - all of the above
- While the OMT group reported a trend toward improvement, the pilot study demonstrated no statistically significant differences between the study groups.
  - true
  - false
- Which of the following symptoms showed the most improvement pre- and post-treatment on day 1?
  - cough
  - postnasal drip
  - facial pressure
  - ear pressure

Below are the answers to *The AAO Journal's* September 2015 quiz on the article titled "Larson Syndrome of Dysautonomia in Parkinson Disease Managed With Osteopathic Manipulative Treatment: A Case Report" by Muhammad Durrani, DO, MS; Jayme D. Mancini, DO, PhD, FAWM; and Theodore B. Flaum, DO, FACOFP.

- c.** Early in Larson syndrome, erythema develops, after which microcirculation becomes compromised and nerve distribution may experience ischemic injury.
- a.** Larson syndrome is a functional vasomotor hemiparesthesia.
- b.** Patchy bone demineralization is not typical of Larson syndrome.
- b.** An osteopathic structural examination is a key in differentiating Larson syndrome from chronic regional pain syndrome.

Answers to the *AAOJ's* December 2015 CME quiz will appear in the next issue.

# PRE-CONVOCATION—BRAIN 2: BRAIN TISSUE, NUCLEI, FLUID AND RETICULAR ALARM SYSTEM (RAS)

March 13-15, 2016 • Rosen Shingle Creek in Orlando, Florida

## Course Description

The form, function and response mechanisms of the brain's various components will be the focus of this course. Attendees will learn hands-on techniques to effectively release many primary restrictions that can affect the whole body.

In this course, attendees will:

- learn to downregulate main components of the reticular alarm system (RAS), including learning techniques for the medial and lateral columns.
- learn to release specific mechanical restrictions in the ventricular system, including interventricular and intraventricular dysfunctions.
- study and practice techniques to treat patients for dysfunctions in the commissure of fornix, anterior commissure, internal capsule and corticospinal pathways, thalamic nuclei and inferior olivary nuclei.
- deepen skills in facilitating mobility of the brain and spinal cord and in releasing dysfunctions in the layers of the dura, arachnoid and pia mater.
- learn to complete brain and spinal cord release and free the cauda equina and filum terminale, spinal cord nerve roots and foramen magnum area.
- facilitate release of main ascending and descending pathways, as well as gray matter dysfunctions of the spinal cord.

## Prerequisites

Attendees must have completed the course "Brain 1: Palpating and Treating the Brain, Brain Nuclei, White Matter and Spinal Cord." In addition, they must know basic anatomical and physiological terms.

## Continuing Medical Education

24 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Course Times

Sunday through Tuesday from 8 a.m. to 5:30 p.m.

Breakfast and lunch are on your own. Coffee will be provided.

## Course Director

**Bruno J. Chikly, MD, DO (France)**, is a graduate of the medical school at St. Antoine Hospital in Paris. Dr. Chikly also has the French equivalent of a master's degree in psychology. He received an honorary DO degree from the European School of Osteopathy in Maidstone, Kent, in the United Kingdom and a PhD in osteopathy from the Royal University Libre of Brussels in Belgium. He is the author of the book *Silent Waves: The Theory and Practice of Lymph Drainage Therapy*, as well as the creator of a DVD titled *Dissection of the Brain and Spinal Cord*.



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\* The AAO's associate members, international affiliates and supporter members are entitled to register at the same fees as full members.

## Registration Form

**Pre-Convocation Course—Brain 2: Brain Tissue,  
Nuclei, Fluid and Reticular Alarm System (RAS)**  
March 13-15, 2016

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# Cranial and Fascial Distortion Techniques Used as Complementary Treatments to Alleviate Migraine Headache: A Case Report

Jennifer S. Ribar, DO, and Todd A. Capistrant, DO, MHA

## Abstract

Migraine headaches are a common condition, affecting 37 million people in the United States according to the National Headache Foundation.<sup>1</sup> Traditional treatments for patients with migraines include pharmacotherapy, physical therapy and acupuncture. In this case, a 27-year-old female patient who reported experiencing chronic migraine for 3 years had not responded to standard pharmacotherapy that consisted of escitalopram, amitriptyline, topiramate, and sumatriptan. Magnetic resonance imaging and a neurology workup revealed no abnormalities or potential etiologies.

After receiving treatment based on osteopathic cranial manipulative medicine (OCMM) and the fascial distortion model (FDM), the patient reported immediate pain relief, as well as decreased frequency and severity of headaches.

The complementary application of OCMM and FDM is a new concept. The fascial tensegrity change brought about through FDM improves the chances of success with cranial treatments and vice versa. Combining these 2 approaches can be an effective treatment option for patients with chronic headache, which can have a profound impact on quality of life.

## Introduction

Globally, 47% of adults have active headache disorders.<sup>2</sup> Headaches can have a huge effect on an individual's life, preventing participation in work, family activities, and activities of daily living. Treatment approaches for patients with headache include medications, physical therapy, manipulation, and acupuncture.

The National Headache Foundation defines migraine headache as a unilateral headache that lasts 4 to 72 hours that is accompanied by at least one of the following symptoms: nausea, vomiting, photophobia, and phonophobia.<sup>1</sup> Patients whose headaches have no identifiable cause may not respond to pharmacotherapy or other traditional treatments. Osteopathic palpatory diagnosis may reveal soft tissue abnormalities that contribute to or even cause migraine headaches. Osteopathic manipulative treatment may provide relief for these patients.

From the Pacific Northwest University of Health Sciences, College of Osteopathic Medicine in Yakima, Washington.

Financial disclosure: none reported.

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Submitted for publication July 5, 2015; final revision received December 17, 2015; manuscript accepted December 18, 2015.

## Background

The fascial distortion model (FDM) is an osteopathic treatment model developed by Stephen P. Typaldos, DO, in the 1990s. Using body language, mechanism of injury, and subjective and objective findings, FDM can be beneficial in diagnosing and treating patients for virtually any musculoskeletal, neurological, or medical condition.<sup>3</sup> The fascial distortions, or dysfunctions, found in the patient in this case were continuum distortions (CDs), trigger bands, and herniated trigger points (HTPs).

A CD occurs in the calcium-driven transition zone between fascia and bone. The transition zone loses its ability to respond to external forces, essentially resulting in a steplike dysfunction until there is no movement in either transitional direction, causing a CD between the fascia and bone.<sup>3</sup> These distortions usually develop during a sudden change in motion, such as occurs with trauma. Treating patients for CDs involves applying direct pressure into that transition zone until a palpable release is felt.

A trigger band results when a disrupted linear band of fascia realigns abnormally, creating twists or kinks along the line of disruption.<sup>3</sup> Treating patients for trigger bands involves applying

*(continued on page 24)*

*(continued from page 23)*

direct pressure along the band of tissue to release the twists, kinks, or—as is more common in chronic trigger bands—adhesions.

An HTP occurs when underlying tissue such as fascia or subcutaneous fat herniates through an adjacent fascial plane and becomes trapped.<sup>3</sup> Treatment involves applying direct pressure on the herniated tissue until it releases back into the proper fascial layer.

### **Case Presentation**

A 27-year-old woman reported experiencing daily migraine headaches with phonophobia and photophobia for 3 years following an 8-year period of intermittent headaches. According to the patient, pain ranged from 4 to 10 on a 10-point verbal numerical rating scale. At its worst, the pain prevented the patient from going to work and performing basic activities of daily living.

During the patient's initial visit, she described her pain as nonradiating and her pain level as 7 out of 10. The pain was limited to the bilateral occipital region. The patient had previously consulted a neurologist, and she had been treated with escitalopram, amitriptyline, topiramate, and sumatriptan with no relief. A magnetic resonance imaging scan 1 year prior to the patient's initial visit revealed no abnormalities.

The patient's history included a fall at age 8 while tumbling in gymnastics in which the patient hit the back of her head on the mat, a backward fall at age 18 with resulting concussion, and an automobile accident at age 19 with whiplash injury. Other medical history was significant for ovarian cysts and Raynaud phenomenon.

Initial cranial palpation revealed a flatter-than-normal occiput, leading to a diagnosis of a compressed occiput with a cranial rhythmic impulse (CRI) of 5 with very low amplitude. The remainder of the osteopathic structural examination during the first visit revealed somatic dysfunctions in the cervical spine, thoracic spine, ribs, and sacrum. Multiple CDs were found on the occiput, with trigger bands bilaterally from the occiput to the sagittal suture.

After the patient underwent occipital decompression and compression of the fourth ventricle, her CRI remained at 5, but its amplitude increased appreciably. High-velocity, low-amplitude (HVLA) and muscle energy techniques were used on the remainder of the patient's dysfunctions. Reevaluation of the cranium revealed moderate improvement in CRI, which was now at 6.

The patient's occipital CDs were then treated based on FDM, which yielded immediate tissue-texture change in the cranium. The occiput and parietal bones immediately mobilized around the lambdoid suture. Treating the patient's trigger bands bilaterally

resulted in further changes. When the cranium was reevaluated, the occiput felt full instead of flat, the CRI had risen to 9 with even greater amplitude, and the cranial rhythm was not dysfunctional. The patient reported that the pressure she normally felt around the occiput was reduced, and she scored her pain as 1 out of 10.

At the patient's first follow-up visit 2 weeks later, she reported that her headaches had decreased significantly. She had 9 consecutive days without headache. On the 10th day, she developed a relatively mild headache that she scored as 4 out of 10 and that persisted until her first follow-up appointment.

An osteopathic structural examination revealed dysfunctions in the cranial, cervical, and thoracic spine that were similar to those found during the previous visit, and the patient was treated using osteopathic cranial manipulative medicine (OCMM), HVLA, and FDM. Immediately after the patient's osteopathic treatment at the second visit, her dysfunctions were less severe, with approximately 50% less asymmetry than prior to treatment. CDs again were found in the patient's head, though they were smaller and in different locations than those found during the initial visit. The presence of fascial dysfunctions compromised the tensegrity in the musculoskeletal system, allowing some somatic dysfunction to persist.

At the third visit 3 weeks after the second, the patient reported that her headaches moved to the right side of her head with mild pressure in the medial right orbit instead of posteriorly at the occiput. The intensity of the headaches had abated to 3 to 5 out of 10, and they were occurring every 2 to 3 days. Osteopathic findings included an extended, sidebent right cranium with restriction in the right temporal bone and a CRI of 7. Small CDs were detected along the right temporal region.

Treatment included indirect cranial manipulation, temporal lift, and treatment of the CDs using FDM. The patient was also treated for a lacrimal HTP on the medial right orbit. After being treated, the patient again reported experiencing complete pain relief.

In another 2 weeks, the patient reported at her fourth visit that her headaches were occurring only once per week and that her pain intensity was 3 or 4 out of 10. Pain still occurred in the right temporal and right orbital regions. The patient also reported having tension in her neck during the past 2 weeks that she had not had before.

An osteopathic examination revealed that the patient's cranium was sidebent to the right and her CRI was now 8. Palpation of the right shoulder revealed tissue tension that had not been detected previously. When her temporal CD was palpated, the patient said,

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"I feel it in my shoulder." Palpating the right shoulder revealed a supraclavicular HTP and 2 trigger bands running between the acromioclavicular joint and mastoid process (also called shoulder-mastoid trigger bands). Treatment again consisted of OCMM, FDM, and HVLA. Post-treatment evaluation again revealed a freely moving cranium, and the patient reported her headache had resolved.

## Discussion

During development, the bony structures of the cranium are created by dermal ossification of connective tissue. This process allows the dura mater to develop a strong, anchored connection to the inside of the cranial bones.<sup>4</sup> Sutures develop with surfaces that are beveled, serrated, grooved, or a combination thereof, and fasciae run between and among all of these surfaces. Therefore, the dura is continuous with the extracranial fascia.<sup>5</sup>

While the dural membranes regulate the involuntary articular motion of the cranial bones, any change in tissue tension on or around these bones will affect the dura. Any such change affects 2 components of the primary respiratory mechanism (PRM): the mobility of intracranial and intraspinal membranes, including the dura, and the articular mobility of the cranial bones.<sup>5</sup> In such a situation, FDM and OCMM become synergistic.

The fasciae constitute a continuous tensional network that covers and connects every part of the body. Tensegrity can be used to describe how fasciae support the body. Tensegrity structures distribute tension across all structural members to create support and stability. For example, while bones can be considered to be compression struts that are supported by muscles, tendons, and ligaments, the fasciae can be considered as bearing the tension of such structures.<sup>6</sup> Fasciae run very intricately throughout the body, and therefore, they will affect much deeper structures both locally and distally when tension is added or changed. When applied to the cranium, this model of tensegrity helps to explain the benefits of both FDM and OCMM.

Although tissue changes were detected after OCMM was initially applied in the current case, restrictions were found in the cranial sutures upon reexamination that OCMM did not overcome. When FDM treatments were performed, significant tissue-texture change occurred immediately. Reexamination demonstrated that the cranial dysfunction resolved, the CRI improved, and the patient's headache resolved.

The tensegrity principle can effectively explain these results. Distortions create tension in which the fasciae cannot move freely. This tension spreads into surrounding fasciae, bone, and dura, making it difficult for OCMM to fully correct the dysfunctions found in the

PRM. Once FDM corrects these distortions and releases the fascial tensions, OCMM can normalize the PRM.

## Conclusion

In 3 months, the combined use of OCMM and FDM resolved 3 years of chronic headaches for the patient in this case. The fascial tensegrity change produced by FDM improves the results of cranial treatments and vice versa. When these two modalities are used together, they can provide patients with acute and chronic headache with an effective treatment option that can have a profound impact on quality of life.

Further studies to investigate FDM and its use with cranial techniques and other forms of osteopathic manipulative treatment would be beneficial to determining whether FDM has broader application as a complementary osteopathic approach to improve treatment outcomes.

## References

1. Migraine. American Headache Foundation website. 2007. <http://www.headaches.org/2007/10/25/migraine/>. Published October 25, 2007. Accessed December 8, 2015.

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## Sutherland Cranial Teaching Foundation Upcoming Courses



### SCTF Continuing Studies Course: Treating Compressions in the Cranium

March 4–6, 2016  
Double Tree at the Lloyd Center  
Portland, OR  
Course Director: Ken Graham, D.O.  
16 hrs 1A CME anticipated  
Course cost: \$750

### SCTF Basic Course: Osteopathy in the Cranial Field

June 9–13, 2016  
Marian University College of Osteopathic Medicine  
3200 Cold Spring Road  
Indianapolis, IN  
Course Director: Daniel Moore, D.O.  
40 hrs 1A CME anticipated  
Course cost: TBA

Visit our website for enrollment forms  
and course details: [www.sctf.com](http://www.sctf.com)

Contact: Joy Cunningham 907-868-3372  
Email: [jcunningham4715@yahoo.com](mailto:jcunningham4715@yahoo.com)

# FULFORD'S BASIC PERCUSSION HAMMER

April 29–May 1, 2016 • University of North Texas Health Science Center  
Texas College of Osteopathic Medicine in Fort Worth

## Course Description

Based on the work of the late Robert C. Fulford, DO, this course introduces Dr. Fulford's concepts of vibration, love and breath as they relate to osteopathic philosophy and practice.

Strongly influenced by Andrew Taylor Still, MD, DO, and William Garner Sutherland, DO, Dr. Fulford emphasized how the energy of the body affects the physiology of the body. He was a proponent of the percussion hammer, which sends oscillating energy waves through the body to encourage healing.

Attendees will learn about Dr. Fulford's life and practice, and they will come to understand how life energy, fascia and piezoelectricity affect anatomy.

By the end of the course, attendees will be able to evaluate their patients, diagnose dysfunctions and apply vibratory treatment following Dr. Fulford's teachings on the percussion hammer.

## Prerequisite

Attendees must have completed a 40-credit introductory cranial course approved by The Osteopathic Cranial Academy or undergone equivalent training as determined acceptable by the course director.

## Course Times

Friday and Saturday from 8 a.m. to 6 p.m.

Sunday from 9 a.m. to 3 p.m.

## Meal Information

Breakfast and lunch will be provided each day. Please contact the Academy with special dietary needs at (317) 879-1881, ext. 220, or [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org).

## Continuing Medical Education

22 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Course Location

University of North Texas Health Science Center  
Texas College of Osteopathic Medicine  
3500 Camp Bowie Blvd.  
Fort Worth, TX 76107



## Course Director

When **Richard W. Koss, DO**, completed his undergraduate degree at Springfield College in Massachusetts, he planned to teach physical education, but an encounter with Bertha Miller, DO, changed his focus to osteopathic medicine.

In 1982, Dr. Koss graduated from what is now the A.T. Still University–Kirksville College of Osteopathic Medicine (ATSU-KCOM) in Missouri, after which he served in the U.S. Air Force Medical Corps for four years as a general medical officer, first at McChord Air Force Base near Tacoma, Washington, and then at Robins Air Force Base near Warner Robins, Georgia.

Dr. Koss first attended a percussion course taught by Robert C. Fulford, DO, in 1987, when Dr. Koss was a resident in osteopathic manipulative medicine at ATSU-KCOM. Two years later, Dr. Fulford invited Dr. Koss to be a table trainer for a percussion course. Dr. Koss continued to assist Dr. Fulford until the latter's death in 1997.

## Travel Arrangements

Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or [globallyyourstravel@cox.net](mailto:globallyyourstravel@cox.net).

Registration Fees	By March 28, 2016	After March 28, 2016
Academy member in practice*	\$914	\$1,064
Resident or intern member	\$714	\$864
Student member	\$514	\$664
Nonmember practicing DO or other health care professional	\$1,114	\$1,264
Nonmember resident or intern	\$914	\$1,064
Nonmember student	\$714	\$864

\* The AAO's associate members, international affiliates and supporter members are entitled to register at the same fees as full members.

## Registration Form

### Fulford's Basic Percussion Hammer

April 29–May 1, 2016

Name: \_\_\_\_\_ AOA No.: \_\_\_\_\_

Nickname for badge: \_\_\_\_\_

Street address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Click here to view the [AAO's cancellation and refund policy](#).  
Click here to view the [AAO's photo release statement](#).

- I am a practicing health care professional.
- I am a resident or intern.
- I am an osteopathic or allopathic medical student.

The AAO accepts check, Visa, MasterCard and Discover payments in U.S. dollars. The AAO does not accept American Express.

Credit card No.: \_\_\_\_\_

Cardholder's name: \_\_\_\_\_

Expiration date: \_\_\_\_\_ 3-digit CVV No.: \_\_\_\_\_

Billing address (if different): \_\_\_\_\_

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

Signature: \_\_\_\_\_



Register online at [www.academyofosteopathy.org](http://www.academyofosteopathy.org), or submit this registration form and your payment by email to [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org); by mail to the American Academy of Osteopathy, 3500 DePauw Blvd., Suite 1100, Indianapolis, IN 46268-1136; or by fax at (317) 879-0563.



# WALKING TOWARD HEALTH: NEW EVALUATIONS IN GAIT

July 29-31, 2016 • The Pyramids, Indianapolis

## Course Description

Edward G. Stiles, DO, FAAO, and Charles A. Beck, DO, FAAO, will present research data that support using a functional approach to treat patients for gait dysfunctions.

During the past few decades, gait concepts have evolved from using a leg-propelling model to using the trunk-driving model that Serge Gracovetsky, PhD, outlined in his book *The Spinal Engine*. Dr. Stiles suggests that combining these two models with the floating compression pelvic model and the Mitchell axes model will provide a comprehensive understanding of gait mechanics. With traditional approaches to osteopathic manipulative treatment, sacral- and innominate-related gait dysfunctions can persist. By employing the clinical approach presented in this course, physicians can be confident that their patients are walking toward health.

## Course Location

**Pyramid Three** (two buildings away from the AAO's office)  
3500 DePauw Blvd., lower level, Conference Rooms A and B  
Indianapolis, IN 46268  
(317) 879-1881, ext. 220

## Course Times and Meal Information

Friday, Saturday and Sunday from 8 a.m. to 5:30 p.m. Breakfast and lunch will be provided. Please contact the AAO's event planner with special dietary needs at (317) 879-1881, ext. 220, or [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org).

## Continuing Medical Education

24 credits of NMM- and FP-specific AOA Category 1-A CME anticipated.

## Travel Arrangements

Contact Tina Callahan of Globally Yours Travel at (800) 274-5975 or [globallyyourstravel@cox.net](mailto:globallyyourstravel@cox.net).

Registration Fees	By June 28, 2016	After June 28, 2016
Academy member in practice*	\$866	\$1,016
Member resident or intern	\$665	\$816
Student member	\$466	\$616
Nonmember practicing DO or other health care professional	\$1,066	\$1,216
Nonmember resident or intern	\$866	\$1,016
Nonmember student	\$665	\$816

\* The AAO's associate members, international affiliates and supporter members are entitled to register at the same fees as full members.

The AAO accepts check, Visa, MasterCard and Discover payments in U.S. dollars. The AAO does not accept American Express.



## Course Directors

A 1965 graduate of what is now the A.T. Still University–Kirkville College of Osteopathic Medicine in Missouri, **Edward G. Stiles, DO, FAAO**, has a rich and deep understanding of numerous pioneering concepts, events and personalities in osteopathic medicine.

While an osteopathic medical student, Dr. Stiles trained with George Andrew Laughlin, DO, a grandson of Andrew Taylor Still, MD, DO. Early in his medical career, Dr. Stiles took over the Cambridge, Massachusetts, practice of Perrin T. Wilson, DO, an internationally recognized osteopathic physician and the second person to lead the American Academy of Osteopathy. Dr. Stiles established the first hospital-based osteopathic manipulative treatment (OMT) service in the United States, and he helped develop the first OMT billing codes. Additionally, he has been recognized by the American Osteopathic Association as a Great Pioneer in Osteopathic Medicine.

Dr. Stiles has taught at the osteopathic medical colleges at Oklahoma State University, Michigan State University and the University of Pikeville in Kentucky. He has delivered the American Osteopathic Association's Andrew Taylor Still Memorial Address, as well as the Academy's Thomas L. Northup Lecture, its Scott Memorial Lecture and its Harold A. Blood, DO, FAAO, Memorial Lecture. Dr. Stiles also is a recipient of the Academy's highest award, the Andrew Taylor Still Medallion of Honor.



Like Dr. Stiles, **Charles A. Beck, DO, FAAO**, is board certified in neuro-musculoskeletal medicine. He earned his DO degree from the University of Pikeville-Kentucky College of Osteopathic Medicine (UP-KYCOM).

Dr. Beck has received many awards, including the Edward G. Stiles Award for Osteopathic Manipulation from UP-KYCOM, and he serves as an adjunct faculty member for several osteopathic medical schools, including the Lake Erie College of Osteopathic Medicine and the Marian University College of Osteopathic Medicine. Dr. Beck is in private practice in Indianapolis at the Meridian Holistic Center.

Click here to view the [AAO's cancellation and refund policy](#).

Click here to view the [AAO's photo release statement](#).



Register online at [www.academyofosteopathy.org](http://www.academyofosteopathy.org), or contact the Academy at [EventPlanner@academyofosteopathy.org](mailto:EventPlanner@academyofosteopathy.org) or at (317) 879-1881, ext. 220.



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- Manuscript formatted in Microsoft Word for Windows (.doc, .docx), text document format (.txt), or rich text format (.rtf)

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- Cover letter addressed to the *AAOJ*'s scientific editor with any special requests (eg, rapid review) noted and justified
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- "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
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- Numbered references, tables, and figures cited sequentially in the text
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- "Acknowledgments" section with a concise, comprehensive list of the contributions made by individuals who do not merit

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## Publication in the *JAOA*

Please include permission to forward the manuscript to *The Journal of the American Osteopathic Association* if the *AAOJ*'s scientific editor determines that the manuscript would likely benefit osteopathic medicine more if the *JAOA* agreed to publish it.

Questions? Contact [editoraaoj@gmail.com](mailto:editoraaoj@gmail.com).

# Component Societies and Affiliated Organizations Calendar of Upcoming Events

**Jan. 15-17, 2016**

The Osteopathic Cranial Academy  
**Visual Somatic Dysfunction: Diagnosis and Management**  
Course director: Paul E. Dart, MD, FCA  
Eugene, Oregon  
25 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.cranialacademy.org](http://www.cranialacademy.org).

**Jan. 22-26, 2016**

Michigan State University College of Osteopathic Medicine  
**Craniosacral Techniques: Part I**  
Course director: Barbara J. Briner, DO  
East Lansing, Michigan  
35 credits of AOA Category 1-A CME anticipated  
Learn more and register at [com.msu.edu](http://com.msu.edu).

**Feb. 5-7, 2016**

Maine Osteopathic Association  
**Midwinter Symposium**  
Holiday Inn by the Bay, Portland, Maine  
21.75 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.mainedo.org](http://www.mainedo.org).

**Feb. 13-17, 2016**

The Osteopathic Cranial Academy  
**Winter introductory course: Osteopathy in the Cranial Field**  
Course director: Zinaida Pelkey, DO  
Albuquerque Marriott Hotel in New Mexico  
40 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.cranialacademy.com](http://www.cranialacademy.com).

**Feb. 19-21, 2016**

The Osteopathic Cranial Academy  
**Changing Lives: Osteopathy's Gift to Children**  
Course director: Margaret A. Sorrel, DO, FCA  
Assistant course director: Miriam V. Mills, MD, FAAP  
Albuquerque Marriott Hotel in New Mexico  
20.5 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.cranialacademy.com](http://www.cranialacademy.com).

**March 4-6, 2016**

Michigan State University College of Osteopathic Medicine  
**Advanced Clinical Pearls**  
Course director: Edward G. Stiles, DO, FAAO  
East Lansing Marriott in Michigan  
22.5 credits of AOA Category 1-A CME anticipated  
Learn more and register at [com.msu.edu](http://com.msu.edu).

**March 4-6, 2016**

Sutherland Cranial Teaching Foundation  
**Treating Compressions in the Cranium**  
Course director: Kenneth Eugene Graham, DO  
DoubleTree at the Lloyd Center  
Portland, Oregon  
16 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.sctf.com](http://www.sctf.com).

**March 16, 2016**

DO-Touch.NET  
**Annual meeting: Treatment Response or Adverse Event?**  
Rosen Shingle Creek in Orlando, Florida  
8 credits of AOA Category 1-A CME anticipated  
Learn more at [www.do-touch.net](http://www.do-touch.net).

**April 15-19, 2016**

Michigan State University College of Osteopathic Medicine  
**Muscle Energy: Part I**  
Course director: Carl W. Steele, DO, PT  
Course faculty: Edward Isaacs, MD,  
and Mark Bookhout, MS, PT  
East Lansing, Michigan  
34 credits of AOA Category 1-A CME anticipated  
Learn more and register at [com.msu.edu](http://com.msu.edu).

**May 6-8, 2016**

Osteopathic Center, San Diego  
**Intermediate cranial course:**  
**Expanding Osteopathic CMM for the Intermediate**  
Course director: Raymond J. Hruby, DO, MS, FAAODist  
40 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.the-promise.org](http://www.the-promise.org).

**May 11, 2016**

American Osteopathic Association  
of Prolotherapy Regenerative Medicine  
**Pre-conference: Mesotherapy**  
Course director: Aline G. Fournier, DO  
Rancho Bernardo Inn, San Diego  
8 credits of AOA Category 1-A CME anticipated  
Learn more and register at [www.prolotherapycollege.org](http://www.prolotherapycollege.org).

The Rocky Mountain Academy of Osteopathy, the Sutherland Cranial Teaching Foundation, the prolotherapy association, and the Michigan State University College of Osteopathic Medicine have programs in later May, June and beyond. Visit the Academy's website at [www.academyofosteopathy.org](http://www.academyofosteopathy.org) for a more extensive list.