

THE AAO

# JOURNAL



A Publication of the American Academy of Osteopathy

VOLUME 5 NUMBER 4 WINTER 1995

**Inner Man—  
Comprised of Mind and Spirit**

...see page 9

# WINTER OMT Update - February 3-4, 1996

(Intermediate Course)

## "Application of Osteopathic Concepts in Clinical Medicine and Preparation for OMM Boards"

Deadline for  
Advance Registration:  
January 1, 1996

Program Chairperson:  
Melicien Tettambel, DO, FAAO

Location:  
Airport Holiday Inn; Indianapolis, IN

### Saturday, February 3

- 7:30 am *Course Overview*
- 8:00 am *HVLA*  
Catherine M. Kimball, DO
- 8:45 am *Muscle Energy*  
Melicien Tettambel, DO, FAAO
- 9:30 am *Counterstrain*  
Elaine M. Wallace, DO
- 10:15 am *Small Group Discussion*
- 10:25 am *Myofascial Release*  
Melicien Tettambel, DO, FAAO
- 11:15 am *Cranial Osteopathy*  
Theresa Cisler, DO
- 12:30 pm Lunch
- 1:00 pm *Building and Promoting  
OMT Practice*  
Panel
- 2:00 pm *Cervical Spine*  
Elaine M. Wallace, DO
- 3:30 pm *Lumbar Spine and Pelvis*  
Catherine M. Kimbell, DO
- 5:00 pm *OMM Board Applications &  
Case Studies*  
Faculty
- 6:30 pm Adjourn

### Sunday, February 4

- 7:30 am *Thoracic Spine & Ribs*  
Elaine M. Wallace, DO
- 9:00 am *The Extremities*  
Theresa Cisler, DO
- 10:30 am *OMT in OB/Gyn*  
Melicien Tettambel, DO, FAAO
- 11:30 am *OMT in Pediatrics*  
Theresa Cisler, DO
- 12:30 pm Lunch
- 1:00 pm *OMT in Geriatrics*  
Catherine M. Kimball, DO
- 2:00 pm *My Favorite Technique*  
Panel and Audience
- 3:00 pm *Summary  
Questions & Answers*
- 3:30 pm Adjourn

#### CME Hours:

2 Days - 18 Category 1-A

#### Course Objectives:

This Academy program is designed for the physician desiring the following:

- OMT Review: Hands-on experience and troubleshooting
- Integration of OMT in treatment of various cases
- Preparation for OMT practical portions of certifying boards
- Preparation for AOBSPOMM (American Osteopathic Board of Special Proficiency in Osteopathic Manipulative Medicine)

### Winter OMT Update Registration

February 3-4, 1996  
Holiday Inn Airport  
Indianapolis, Indiana

Name for Badge (please print clearly)

Street Address for Confirmation

City State Zip

Daytime Phone Number

AOA Number

College and Year Graduated

#### SEMINAR FEE:

##### Prior to January 1, 1996:

AAO Member	\$475
Intern/Resident	\$250
AAO Non-Member	\$525

##### After January 1, 1996:

AAO Member	\$575
Intern/Resident	\$350
AAO Non-Member	\$625

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2501 South High School Road  
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(317) 244-6861

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# THE AAO JOURNAL

A Publication of the American Academy of Osteopathy

The mission of the American Academy of Osteopathy is to teach, explore, advocate, and advance the study and application of the science and art of total health care management, emphasizing osteopathic principles, palpatory diagnosis and osteopathic manipulative treatment.

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# Instructions for Authors

The American Academy of Osteopathy (AAO) Journal is intended as a forum for disseminating information on the science and art of osteopathic manipulative medicine. It is directed toward osteopathic physicians, students, interns and residents and particularly toward those physicians with a special interest in osteopathic manipulative treatment.

The AAO Journal welcomes contributions in the following categories:

## Original Contributions

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

## Case Reports

Unusual clinical presentations, newly recognized situations or rarely reported features.

## Clinical Practice

Articles about practical applications for general practitioners or specialists.

## Special Communications

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

## Letters to the Editor

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

## Professional News

News of promotions, awards, appointments and other similar professional activities.

## Book Reviews

Reviews of publications related to osteopathic manipulative medicine and to manipulative medicine in general.

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

## Submission

Submit all papers to Raymond J. Hruby, DO, FAAO, Editor-in-Chief, MSU-COM, Dept. of Biomechanics, A-439 E. Fee Hall, East Lansing, MI 48824.

## Editorial Review

Papers submitted to *The AAO Journal* may be submitted for review by the Editorial Board. Notification of acceptance or rejection usually is given within three months after receipt of the paper; publication follows as soon as possible thereafter, depending upon the backlog of papers. Some papers may be rejected because of duplication of subject matter or the need to establish priorities on the use of limited space.

## Requirements for manuscript submission:

### Manuscript

1. Type all text, references and tabular material using upper and lower case, double-spaced with one-inch margins. Number all pages consecutively.
2. Submit original plus one copy. Please retain one copy for your files.
3. Check that all references, tables and figures are cited in the text and in numerical order.
4. Include a cover letter that gives the author's full name and address, telephone number, institution from which work initiated and academic title or position.
5. Manuscripts must be published with the correct name(s) of the author(s). No manuscripts will be published anonymously, or under pseudonyms or pen names.

## Computer Disks

We encourage and welcome computer disks containing the material submitted in hard copy form. Though we prefer Macintosh 3-1/2" disks, MS-DOS formats using either 3-1/2" or 5-1/4" discs are equally acceptable.

## Illustrations

1. Be sure that illustrations submitted are clearly labeled.
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3. Include a caption for each figure.

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## References

1. References are required for all material derived from the work of others. Cite all references in numerical order in the text. If there are references used as general source material, but from which no specific information was taken, list them in alphabetical order following the numbered journals.
2. For journals, include the names of all authors, complete title of the article, name of the journal, volume number, date and inclusive page numbers. For books, include the name(s) of the editor(s), name and location of publisher and year of publication. Give page numbers for exact quotations.

## Editorial Processing

All accepted articles are subject to copy editing. Authors are responsible for all statements, including changes made by the manuscript editor. No material may be reprinted from *The AAO Journal* without the written permission of the editor and the author(s).

## From the Editor

by Raymond J. Hruby, DO, FAAO

# In the Company of Giants

I dispense with my usual philosophical ramblings here in order to dedicate this issue's Editorial Page to some words about a couple of important people. You are all aware by now that in recent months two long-standing members of the Academy, both giants in our profession, have passed away. Vic Hoefner, DO, FAAO, passed away in August of this year from injuries sustained in a fall from his horse. Additionally, I understand that John Harakal, DO, FAAO, died while working in his yard at home.

The news of the passing of these two fine human beings appears in the *AAO Newsletter*, so I will not repeat any of that information here. But, I do want to say a few words about Vic and John, partly because of the status they held within the Academy, and especially because I knew them both well and because they both had a great influence on me. Whenever I had a chance to be around them I knew I was in the company of giants.

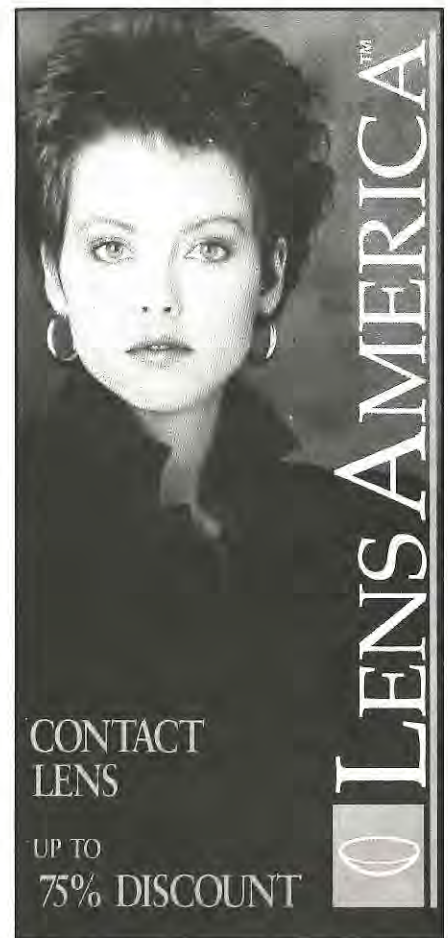
Vic Hoefner was exemplary in his osteopathic practice, his teaching and his dedication to the Academy and the profession. His background in anesthesiology allowed him to write several articles on the application of osteopathic principles to this field of practice. Vic's childhood illnesses led him to pursue a strong interest in physical fitness, especially gymnastics. He used these activities to build up his body and provide himself with a long and healthy life. His interest in these areas led him to design exercise programs especially suited to senior citizens, and he developed video tapes to demonstrate his programs. As a child he turned away from piano

lessons in favor of the trumpet, which he felt was better for his overall health, especially since he suffered from pulmonary problems. This led to an interest in the health and occupational problems of musicians, and Vic was extremely knowledgeable in the area of music medicine. I learned a great deal from him about the application of osteopathic principles in the areas of exercise and music medicine.

Anyone who has ever even heard of John Harakal knows of his lifelong dedication to the work of William Garner Sutherland, and his work with the Sutherland Cranial Teaching Foundation and The Cranial Academy. He was also well known for his professional contributions through the Educational Council on Osteopathic Principles, the National Board of Osteopathic Medical Examiners and his teaching at the Texas College of Osteopathic Medicine. To me, he had a most interesting way of thinking about almost everything. He had, in my opinion, an amazing grasp of osteopathic principles and osteopathic thinking, and I always enjoyed learning more and more from him how he applied this thinking to his everyday life. John was also one of the members of the Board on Fellowship who tested me when I received my Fellowship in the Academy.

I will miss both of these individuals, as will we all. I will miss them for their knowledge, their humor and their gentlemanly natures. They were both truly giants among us.

All of this makes me think that we all sometimes forget about the opportunities and blessings that surround us until they are gone. Whenever I am at Academy



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gatherings, I constantly remind myself that I am among the giants of our profession. When I am around students I am aware they are the giants of the future. We have so much to learn from each other and so much to give to each other. We should not waste a moment of these precious opportunities, especially when we are in the company of giants.

## Message from the President

by Boyd R. Buser, DO



As president of the American Academy of Osteopathy, I find myself traveling a great deal, representing the Academy at a variety of functions. Examples from the last several months include: Oklahoma Osteopathic Association's Annual Convention, AOA Council on Federal Health Programs, AOA Congressional Reception in Washington, D.C., the Osteopathic Graduate Medical Education Conference, the AOA Board of Trustees and House of Delegates (July), Council on Post Doctoral Training (COPT) and, most recently, the Second Interdisciplinary World Congress on Low Back Pain.

In the president's message from the most recent issue of the AAO Journal, I commented on the results of a survey of the leaders of the osteopathic profession and their opinions of the Academy. The respect for the Academy and its leadership, which has been gradually growing over the past several years, did not happen by accident. While the time commitment of your Academy leaders is significant, it is essential. There is no substitute for our physical presence at the gatherings which shape our profession's policies. When the Academy's representatives arrive at AOA board meetings, our presence is always acknowledged to me group in a positive manner and there is an expectation that our voice will be heard and our contributions significant.

Good intentions and professional integrity get us nowhere if we are not present at the table. We must be willing to commit the time necessary to accomplish our tasks. This applies not only to the officers of the Academy, but also to the committee chairs, committee members and the rank and file membership. As President-Elect Michael Kuchera, DO, FAAO completes his plans for his presidential term, many of you will be receiving notices from the Academy determining your "willingness to serve" in various capacities on our committees. Please take the time to consider what your commitment to serve means. I remember my first Academy committee appointment. It as the membership committee. I never dreamed that commitment would eventually lead to the level of involvement that it has. However, I demonstrated my willingness to follow through on my commitments, my responsibilities gradually grew.

It is clear that not all of you who become committee members today will become Academy president tomorrow, but in order for the Academy to achieve its potential, the pledge to commitment must be just as serious at every level. I have always looked at my involvement with the Academy as a great opportunity to serve the profession. I hope you feel the same.

## A. T. Still Medallion Deadline Nears

The deadline to submit the name of a candidate for the 1997 A.T. Still Medallion of Honor is April 15, 1996.

Deserving members of the Academy who shall have exhibited among other accomplishments in scientific or professional affairs an exceptional understanding and application of osteopathic principles, and of the concepts which are the outgrowth of those principles, may be awarded the Andrew Taylor Still Medallion of Honor. The Academy cherishes this award as its highest honor, and all petitions are considered confidential.

If you have any questions or need any additional information about this procedure, please contact the Academy office or refer to page 140 of your AAO 1995 Directory.

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## Message from the Executive Director

by Stephen J. Noone, CAE



It is a fact that allopathic physicians are looking to the osteopathic profession for leadership in defining the utilization of manipulation in the practice of medicine today. Why is this important? Consider that the osteopathic profession is the only branch of mainstream medicine that has a continuum of education and certification in manipulative medicine. Is this worth preserving or should the profession go its own way, knowing that allopathic medicine may eventually establish a parallel system of certification in *manual medicine*.

In the past month, there were several developments which illustrate how the osteopathic profession's leadership in manipulative medicine is evolving. The American Academy of Osteopathy continues to be instrumental in representing the profession to establish basic osteopathic principles and practice as the *gold standard* for manipulative medicine.

At the American Osteopathic Association's Board of Trustees meeting in October, the Board called for the AOA President to appoint a Task Force to explore the profession's relationship with allopathic physicians outside the United States. One example is Europe where MDs have expressed an interest in the study of osteopathic manipulative medicine. In light of the Academy's experience in this arena, Dr. **Eugene Oliveri**, Chairman of the AOA Bureau of Professional Education, assured Academy President **Boyd Buser** that he would advocate the appointment of AAO representatives to this Task Force.

On November 4, the American Osteopathic Association's Council on Postdoctoral Training (COPT) endorsed a revision in the Basic Standards for Residency Training in Osteopathic Manipulative Medicine. The revision is significant in that it provides a mechanism for allopathic physicians to enroll in AOA-approved residency training programs in osteopathic manipulative medicine (OMM). The proposal was first presented by the Academy to the AOA House of Delegates in July 1993. The revised document now goes to the AOA's Bureau of Professional Education for approval in January 1996 and referral to the full AOA Board of Trustees for final approval in February 1996.

A week later, the Academy's leadership attended the Second Interdisciplinary Congress on Low Back Pain. *The Integrated Function of the Lumbar Spine and Sacroiliac Joints* was the theme of this Congress in San Diego. Organized by the University of California San Diego and European Conference Organizers, the Congress co-sponsors included the AAO, the American Association of Orthopaedic Medicine (AAOM) and the International Federation of Manual Medicine (FIMM).

Several faculty members were Academy members: **Richard M. Bachrach** of New York City; **Jane E. Carreiro** of UNECOM; **Philip E. Greenman** of MSU-COM (also member of the Congress Advisory Board); **Robert E. Irvin** of Fort Worth, TX; **Michael L. Kuchera** of KCOM; **Thomas H. Ravin** of Denver, CO; and **Frank Willard** of UNECOM. AAO President **Boyd Buser** represented the Academy as co-sponsor and I staffed an exhibit booth at the Congress to promote the Academy, its programs and services to physicians in attendance.

The value of the Academy's presence at the World Congress goes beyond the participation of its members as speakers and conference attendees. At this event, the Academy's leadership also had the opportunity to interact with international allopathic leaders who have a demonstrated interest in manipulative medicine. The presence of the AAO's exhibit booth offered the Academy's representatives an opportunity to communicate the organization's mission and demonstrate the quality programs and resources available to physicians who are interested in manipulative medicine.

### *Sage Sayings of Still*

By George V. Webster, DO

#### "Skill"

"To be an osteopath you must study and know the exact construction of the human body, the exact location of every bone, nerve, fiber, muscle and organ, the origin, the course and flow of all the fluids of the body, the relation of each to the other, and the functions it is to perform in perpetuating life and health. In addition, you must have the skill and ability to enable you to detect the exact location of any and all obstructions to the regular movements of this grand machinery of life. Not only must you be able to locate the obstruction, but you must have the skill to remove it."

— Autobiography, p. 358-359.

# Calendar of Events

## February

**3-4**

*Winter OMT Update –  
Application of Osteopathic Concepts  
in Clinical Medicine plus Preparation  
for OMM Boards*

Melicien Tettambel, DO, FAAO

Program Chairperson

Holiday Inn Airport

Indianapolis, IN

CME Hours: 20 Category 1-A

Contact: Diana Finley

Associate Executive Director

(317) 879-1881

**13-14**

*MidWinter Basic Course*

*"Osteopathy in the Cranial Field"*

The Cranial Academy

Allerton Hotel, Chicago, IL

40 Hours, Category 1A

Contact: Pat Crampton, Executive Director

(317) 594-0411

## March

**25-26**

*Use of the Percussion Vibrator  
in Adults and Children*

Stouffer Waverly Hotel

Atlanta, GA

16 hours of Category 1-A Credit

Indiana Academy of Osteopathy

Contact: Michael H. Claphan, CAE

(317) 926-3009

## April

**19-23**

*Sutherland Cranial Teaching Foundation*

Indianapolis, IN

40-hours of Category 1-A Credit

Contact: Judy Staser

(817) 735-2498

**19-21**

*Introductory Visceral Manipulation*

Ann Arbor, MI

25 hours of Category 1-A Credit

Southeastern Michigan Cranial Study Group

Contact: Jay Sandweiss, DO

(313) 995-1880

## May

**6-7**

*Applied Kinesiology: Practical Applications  
for the Osteopathically-Oriented Physician*  
Seattle, WA

14 hours of Category 1-A Credit

Puget Sound Academy of Osteopathy

Contact: Daniel Bensky, DO

(206) 517-4541

**17-19**

*Muscle Energy Tutorial*

20 Hours; Category 1A

Walter Ehrenfeuchter, DO, FAAO,

Program Chairperson;

Adams Mark Hotel, Indianapolis, IN

Contact: Diana Finley

(317) 879-1881

**18-19**

*Advanced Percussion Vibrator*

Robert Fulford, DO & Richard Koss, DO

15 Hours, Category 1A

Adams Mark Hotel, Indianapolis, IN

Contact: Diana Finley

(317) 879-1881

## June

**18-21**

*Basic Course,*

*Osteopathy in the Cranial Field*

The Cranial Academy

Holiday Inn International Drive,

Orlando, FL

40 Hours, Category 1A

Contact: Pat Crampton,

Executive Director,

(317) 594-0411

**23-25**

*Annual Conference*

The Cranial Academy

Holiday Inn International Drive,

Orlando, FL

40 Hours, Category 1A

Contact: Pat Crampton,

Executive Director,

(317) 594-0411

**28-30**

*Osteopathic Considerations in Systemic  
Dysfunction; 25 Hours, Category 1A CME;*  
Michael Kuchera, DO, FAAO; Instructor  
and Program Chairperson; Chicago College  
of Osteopathic Medicine,

Contact: Diana Finley

(317) 879-1881

## July

**26-30**

*Intermediate/Advanced Visceral*

Jean- Pierre Barral, DO, MROF

John Glover, DO, Program Chairperson

40 Hours, Category 1A CME

Loews Ventana Canyon, Tucson, AZ

Contact: Diana Finley

(317) 879-1881

**27-28**

*Concept and Technique  
of the Levitor Orthotic Device*

Michael Kuchera, DO, FAAO,

Instructor and Program Chairperson

16 Hours, Category 1A CME

Loews Ventana Canyon, Tucson, AZ

Contact: Diana Finley

(317) 879-1881

## September

**6-8 (tentative)**

*Introductory to Visceral Manipulation*

John Glover, DO, Program Chairperson

25 Hours, Category 1A

Indianapolis, IN

Contact: Diana Finley

(317) 879-1881

**26-29**

*AAO Fall OMT Update*

*Application of Osteopathic Concepts  
in Clinical Medicine plus*

*Preparation of the OMM Boards*

Ann Habenicht, DO, Program Chairperson

22 Hours, Category 1A

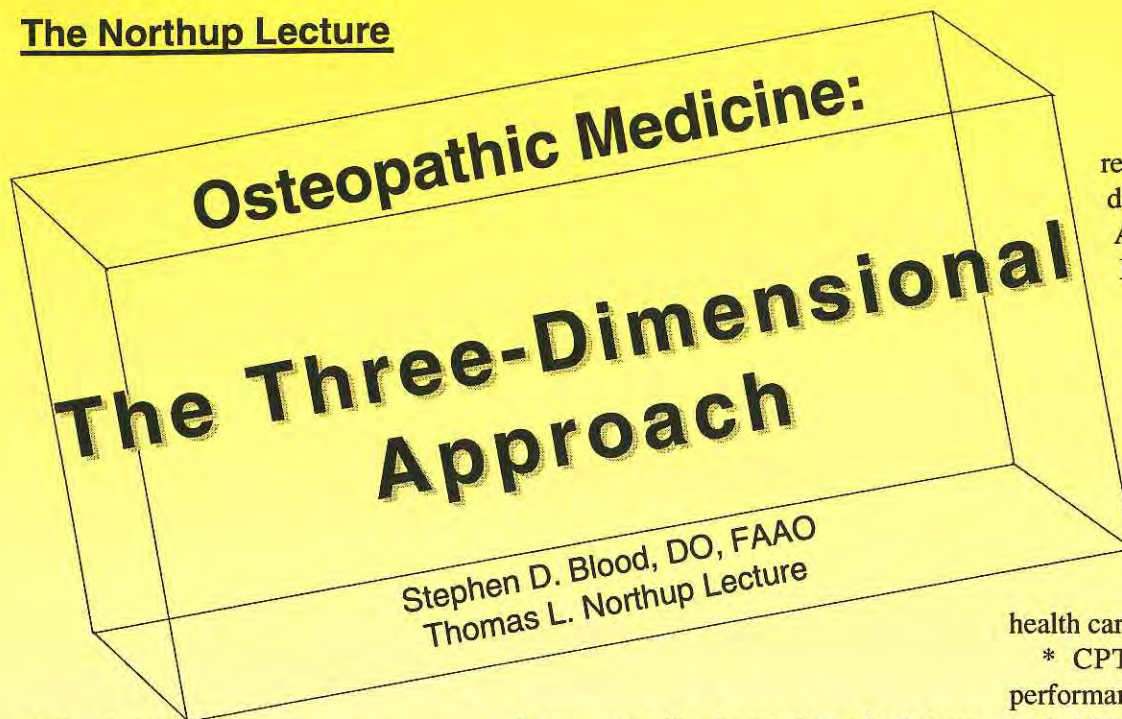
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Contact: Diana Finley

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## The Northup Lecture



### *Editor's Note:*

*Stephen D. Blood, DO, FAAO, made the following presentation at the Thomas L. Northup luncheon during the convention of the American Osteopathic Association on October 18, 1995.*

*Dr. Blood received his Doctor of Osteopathy degree from Kirksville College of Osteopathic Medicine, where he was active in and President of the UAAO. He served his internship at the Osteopathic Hospital of Maine in Portland and is a Diplomate of the National Osteopathic Board of Examiners.*

*He is a fellow of the American Academy of Osteopathy, is certified by the American College of General Practitioners in Osteopathic Medicine and Surgery and has completed the Competency Exam given by The Cranial Academy.*

*Since 1968, Dr. Blood has served on numerous boards and committees and has been active in such programs as the Visiting Clinicians and Golden Ram Programs since their inception.*

I am honored to have been chosen by my peers to deliver this Thomas L. Northup Lecture. For 20 years I have

been inspired by the wisdom of previous lecturers — my mentors — and today, I hope to honor them.

Although I never knew Dr. Thomas Northup, this Academy's founder, I once heard him speak at an AOA meeting by telephone link. By reputation, he was a leader, a pillar in our profession and a man of great integrity.

As a group, the Northup speakers have acknowledged many needs: better integration of osteopathic theory and practice in all our basic science and clinical rotations; the critical need for more osteopathic research and more published articles on osteopathy in a clinical setting. I agree 100 percent with their assessments.

Our Academy has made several important advances in recent years. Our educational offerings have been expanded. We have made a significant impact on the AOA and our colleagues. The profession recognizes our proficiency examination in osteopathic diagnosis and treatment. We now have a professionally-staffed, permanent home in Indianapolis. We have enlightened leadership.

This past year has been a good one for DOs who administer manipulation:

\* Osteopathic manipulation has

received extensive exposure and debate within the American Academy of Family Physicians.

\* Insurance companies and the public have received positive reinforcement for the use and benefits of manipulation through the guidelines for the treatment of acute low back pain.

\* Congress defeated a bureaucratic managed

health care system.

\* CPT codes for manipulation performance by DOs now exist.

\* New research at the University of Maryland has established a link between the cervical spine, its dura and headaches.

\* Osteopathic medical colleges have had a banner year with more than 20,000 applications.

\* Dr. Andrew Weil's book, *Spontaneous Healing*, has generated new public interest in manipulation.

Hopefully, our Academy, our educational institutions and our profession will be able to successfully meet the challenges represented by such increased exposure and demand.

Dr. Andrew Taylor Still, our founder, conceived of osteopathic medicine as a body, mind and spirit approach to health care — a concept which has withstood the test of time. My presentation today is an effort to expand our understanding and treatment of the patient with this three-dimensional approach.

Although the DOs who use manipulation have had a good year, the practice of whole-person medicine is involved in an ongoing struggle. Boasting of its "efficiency" and "cost containment", managed care programs are undermining historically beneficial aspects of the doctor-patient relationship. Doctor-patient time is reduced, limiting the primary care physicians'

→

opportunities to get to know their patients. The patient may not necessarily see the same doctor or even the same nurse-practitioner on consecutive visits. And, at the end of the contract year, the employer may change "health providers" by awarding the contract to a lower bidder.

In spite of this market-driven health care system crossing the country like a tidal wave, pockets of osteopathic primary care physicians are still thriving and continue to practice the art of treating patients three-dimensionally. The common denominator for these DOs is the need to know and listen to their patients. Osteopathic diagnosis and treatment are integral parts of treating the whole person.

The history of this philosophical approach to healing is rooted in ancient times. Early philosophers and physicians taught their students that man must be considered in the totality of his composite body. The physical body, mind and soul comprised a unified human biological unit. This philosophy was a fundamental principle in the school of medicine founded by Hippocrates who became known as the Father of Medicine.

Almost 2,400 years after Hippocrates lived, Dr. Still championed a medical philosophy which was more in tune with Hippocrates than any other 19th Century approach. Dr. Still concurred with Hippocrates that a doctor should focus on the patient rather than the disease. Historically, medicine has been considered more "science" than philosophy.<sup>1</sup>

In Dr. Still's day, medicine was a series of arbitrary remedies, often more destructive than the disease allegedly being treated. Dr. Still was unique in recognizing the ineffectiveness of these medical treatments and the need for a basic medical philosophy founded on

both anatomical and philosophical principles.<sup>2</sup>

For medicine to be truly successful, it must do more than attempt to relieve or remove the symptoms. Osteopathic diagnosis and treatment of the whole patient is fundamental in treating preventively. Preventative treatment is more than just keeping up with immunizations!

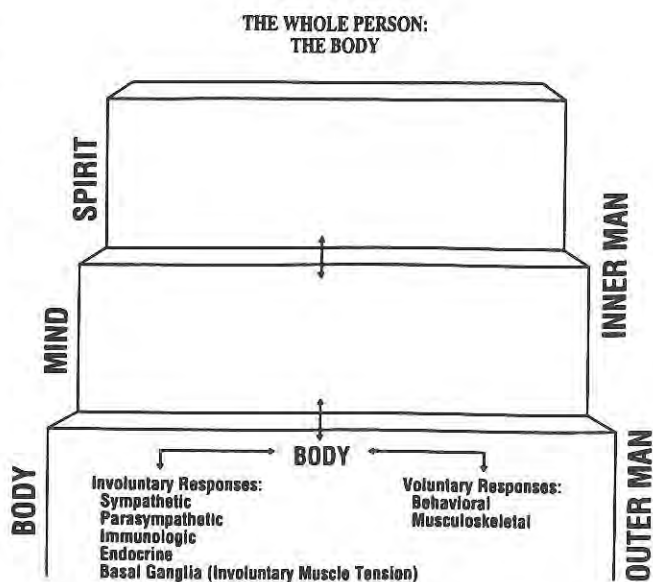
The whole patient approach includes consideration of the patient's education, environment, mental health, economics, exercise, nutrition, religion and other circumstances which influence physical disorder, recovery, health, productivity, happiness and wholeness.

percent of the body's bulk.<sup>3</sup> I know Dr. Still would be pleased to see how Dr. Sutherland's cranial concept and the recent development of visceral manipulation have increased that 60 percent bulk of the body now available for treatment.

Osteopathic diagnosis and treatment play a positive role in the prevention or treatment of most musculoskeletal disorders, and can alter, if not resolve, many functional and pathological processes in the body. The osteopathic manipulative treatment has many goals: to remove the facilitated segment; to rebalance the autonomic nervous system; to prevent, decrease or resolve visceral dysfunction; to regain normal range of motion of joints and fascia; to reduce pain; to improve posture; to restore axial plasmic flow; to move body fluids; to improve breathing and relaxation and to create a tonic effect.

Outside the osteopathic profession, Dr. Still's basic concepts have not yet received the attention and objective scrutiny they deserve. This is most unfortunate, if not scientifically unconscionable.<sup>4</sup> It is even more unfortunate that, at this stage of our osteopathic medical evolution, many of our own have lost sight of the genius in Dr. Still's basic concepts and their beneficial application to patients.

Let's turn to the inner man, comprised of mind and spirit. In the Greek New Testament, the mental, or psychological dimension of a person, is known as the psyche. The mind, or soul, imparts unique elements to each individual, including personality. The mind has three functions: intellect, emotions and will. The mind also monitors the autonomic nervous system. Our mind enables us to comprehend and analyze data from our environment, as perceived by the five senses. We also have tremendous creative potential to understand complex



In approaching the physical body, the first dimension of the whole person, the body frequently reveals its history and physical with gentle diagnostic listening through the operator's hands. With a "tissue diagnosis", treatment can be administered with appropriate guided force to match tissue resistance and accomplish goals set for that visit.

Dr. Still advocated that physicians revive proper circulation by working with the musculoskeletal system. He believed it would be an obvious and gross omission in patient treatment to ignore or slight the musculoskeletal system which comprises more than 60

and abstract ideas.

The creative and spiritual aspects of our being set us apart from all other life on earth. Our memory empowers us to reflect on the remote past and anticipate the distant future, giving us the unique ability to worship God.<sup>5</sup>

In our minds, each of us has a *belief system*, which greatly influences our emotions, will, speech and behavior. This is the core of what we hold to be true about ourselves and the world around us. Our beliefs are shaped first by our parents and later by teachers, peers, television, church, music and a host of other influences. We refine our beliefs as we mature and begin to think for ourselves; yet early influences can be powerful and difficult to change.

The second function of our minds is to *experience emotions*. Pleasurable emotions help us to enjoy intimacy with God and others, whereas painful emotions serve to warn us about unresolved psychological or spiritual problems in the same way that physical pain warns us about an underlying injury or illness. Emotions are processed by the limbic system, consisting of several centers where nerve cells are connected by nerve bundles to form a circuit.

If an individual possesses a negative emotion such as *fear* or *unresolved anger*, it will continue consciously or subconsciously, for years if necessary, until the conflict which created it is resolved. To avoid being paralyzed with fear, a child's mind may unconsciously repress a negative emotion, temporarily or permanently stifling the memory. That negative emotion is still there, being perpetuated in the limbic system. As an adult, this individual will continue to experience more fear and anxiety than the average person, without even knowing why. These negative emotions usually cause symptoms and disease which may go unrecognized for a lifetime.

A key part of the limbic system is the thalamus, an early processing station that receives input from the five senses which it passes on to the cortex for

analysis. If a situation is perceived as threatening, information may move directly from the thalamus to the amygdala, a tiny, almond-shaped structure called "emotion central" by some scientists. It quickly assesses a situation and may produce a primitive reaction of fear or anxiety, sending that message on to the cortex for further thinking and memory enhancement. It may set in motion basic involuntary bodily responses throughout the sympathetic memory systems. In essence, we feel before we think.

The third function of our minds, the human will, is to *make choices of thought, word and action*. Our wills are driven to varying extents by our motives, and the intensity of a motive determines the intensity of our emotions when our will has been thwarted. Our wills often determine our beliefs and behavior. As an old saying goes, "When you have a hammer in your hand, everything looks like a nail." We tend to see and believe what we want or expect to see and believe.

Distortions in our mental sphere commonly flow out of our minds and into bodily functions. John Sarno, MD, Psychiatrist, has successfully treated thousands of patients suffering from tension myositis syndrome or TMS. Most of his patients had low back pain which had not been alleviated by a variety of medical approaches. Dr. Sarno believes repressed emotions such as anxiety, fear and anger cause the tension which leads to muscle spasms and nerve pain.

Other clinical research finds that the two emotions invariably associated with illness are depression, which leads to *hopelessness and isolation*; and chronic anger, which is stressful and alienating. Dr. Bernie Siegel's cancer research found that the two emotions most often associated with physical health are the capacity for *love*, which prompts feelings of security and intimacy; and *hope or faith*, which leads to a sense of meaning and resilience.<sup>6</sup> These healthy emotions encourage more connectedness and awareness, while those that prompt separation and alienation are unhealthy.

Recently, Dr. Larry Leshan identified classic examples of mind-body responses. In his study a majority of cancer patients had suffered a devastating personal loss in the year prior to being diagnosed with cancer, causing them to feel they had lost their central reason for living. Of the cancer patients studied by Dr. Leshan, more than 75 percent had such a pattern of loss versus only 12 percent in a healthy control group.

Another pattern observed in cancer patients was a lifelong difficulty in openly expressing their needs as well as a tendency to repress anger and other strong negative feelings. Such behavioral patterns were evidenced in nearly half of the cancer patients studied, compared with 25 percent of those in a healthy control group.

Over a period of 20 years, Dr. Leshan's "crisis therapy" helped 70 cancer patients identify positive aspects of their lives, instilling in them the importance of self-acceptance and self-approval. Half of his patients eventually went into full remission and were still alive 20 years later, as reported in his book, *You Can Fight For Your Life*.<sup>7</sup>

Bill Moyers' book and subsequent TV interviews have promoted the mind-body connection which is predominantly Eastern philosophy.<sup>8</sup> His media exposure has bolstered the popularity of an approach that was previously considered "fringe". Pain clinics and psychiatrists are now using mind-body approaches to relieve chronic pain and suffering.

Many of our osteopathic colleges do not teach students how to incorporate the mind-body philosophy into their practice of medicine. This practical psychology is desperately needed to uncover many hidden problems. Any doctor, who deliberately and effectively treats the mental factor in a patient's condition, will have an advantage over his less-well-equipped colleagues.<sup>9</sup>

A DO's suspicion of subconscious distress should be heightened when patients are reluctant to have certain non-painful manipulative procedures

→

applied. Patients who do not respond to manipulation for treatment of clinical problems such as temporomandibular joint dysfunction, low back pain, neck pain, headaches and irritable bowel syndrome, are good candidates for psychological consultation. Pathological causes must always be ruled out first. The DO must work in a non-threatening, non-judgmental, patient-friendly office environment to identify patients with repressed anger and fear. I have found that inner person communication can be facilitated with hands-on patient contact. In my experience, treating the head and neck opens up new channels of thinking and lowers patient barriers. The osteopathic student needs to appreciate the power of the mind in the health and disease of each patient.

Historically, when religious fervor ran high, those suffering mental anguish found counsel and comfort by unburdening themselves to their priest. Today, many people have turned their backs on organized religion, even though they desperately need unbiased help. They suppress their suffering until a physical affliction drives them to seek medical advice. Although physician and priest were one and the same person in primitive society, this is no longer the case. Many problems formerly handled by priests now are problems requiring medical attention, which leads us into the second part of the inner man - the human spirit.

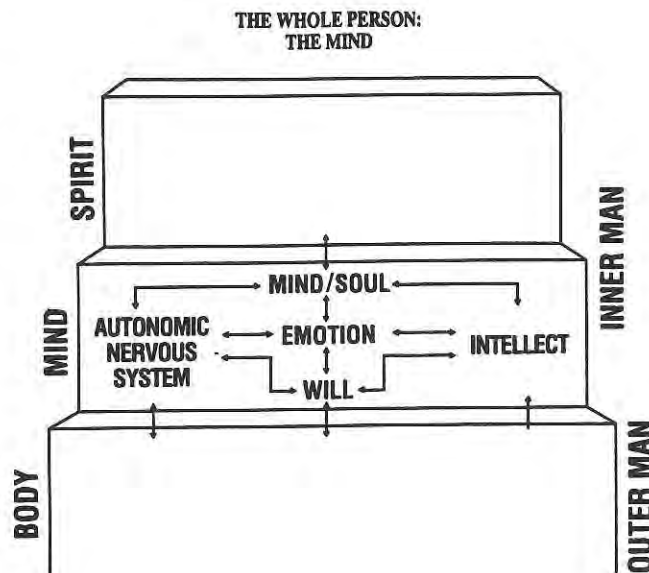
Approaching this second part of the inner man requires a spiritual paradigm within the practicing physician that can work with all patients. My spiritual paradigm is Christian. It does not prevent me from treating patients of other beliefs — including atheists.

To be made in God's image signifies man's creative potential and ability to comprehend complex and abstract ideas.

This capacity for abstract thinking, coupled with the human spirit, also gives us the ability to comprehend the unseen spiritual realities of life.

Dr. Still stated, "The perfection of Deity can be proven by His works. I drew a line between debtor and creditor. On the one side, I placed the works of God. On the other, the acts of man who is the handiwork of God, the intelligent association of mind, matter and all spirit, the child of God, the author and builder of all worlds and all things therein." Dr. Still also stated, "God is the father of osteopathy and I am not ashamed of the child of his mind."<sup>10</sup>

There is no doubt in my own mind



that Dr. Still envisioned osteopathy to be more than just improving the practice of medicine of the day. For Dr. Still, the patient was always more than the sum of his parts. As physicians, we expect science to answer the great questions on the meaning of life, although the answers usually lie within ourselves. If we are comfortable only with answers that can be proven, we will never really be comfortable. Science is not something to worship. We worship to acknowledge and revere the things we don't understand.<sup>11</sup>

Interestingly, like the priests and visionaries, the physicists accept this

"uncertainty principle". Nuclear and particle physics yield this new conviction that there are scientific unpredictables. It has been said that, "Not only does God play dice with the universe, sometimes He rolls them where you can't find them." The search for truth represents a longing, not a destination.

Hebrews 4:12 suggests the extreme difficulty of distinguishing between the soul and the spirit, alike in nature and their activities. Generally speaking, the spirit is considered the higher, the soul, the lower element. The spirit may be recognized as the life principle bestowed on man by God, the soul as the resulting life constituted in the individual, the body being the material organism animated by soul and spirit.

The human spirit is our "spiritual sense organ". All people everywhere have gods, but in most cases they are false gods, invented by the human mind when it rejects the truth about the one God of the universe (Romans 1:18-32). However, when regenerated by the Holy Spirit, the human spirit has the ability to perceive, understand (to a limited degree) and find fellowship with God.

Conscience is our God-given, inborn faculty that tells us right from wrong. It

prompts us to think wholesome thoughts, to speak and act morally and to recognize unwholesome thoughts and immoral behavior. Conscience can be shaped by parents and societal influences toward either of two extremes — permissiveness and intolerance. In today's lax and amoral society, it's not unusual for individuals to have a seared and insensitive conscience in which right and wrong are indiscernible. At the other extreme, in cases of exceptional religious preoccupation, a person becomes obsessed with religious issues, such as a continuing sense of guilt his actions or a

*continued on page 29*

## Letter to A. T. Still

Dear Doctor Still,

As we strive continuously to further our understanding of the principles of osteopathic medicine, we wonder exactly what you thought about as you evaluated a patient. I think many DOs do not know about the information available from yourself and others on this topic.

For instance, in his book *The Lengthening Shadow of Andrew Taylor Still*, Hildreth described at least two ways (pp. 181-184) in which you viewed the human body during your examinations. He spoke about the way you viewed first the bony framework of the body, then the ligaments, muscles, nervous system, arteries, veins, lymphatics and finally the glandular system. He also related how you sometimes divided the spine into sections for diagnostic purposes. These sections were the upper cervical, lower cervical, upper dorsal, mid-dorsal, lower dorsal, the upper four lumbar vertebrae and the fifth lumbar and sacrum. "The causes of impaired health, sickness, pain and disability were directly related to mechanical alterations in the joint structures in these various sections of the spine."

In your own book, *Philosophy of Osteopathy*, you talked about yet another way you sometimes viewed the human body. Here (pp. 28-29) you said: "I have formulated a simple mental diagram that divides the body into three parts, chest, upper and lower limbs. The first division takes in the head, neck, chest, abdomen and pelvis. The second division takes in head, neck, lower and upper arm and hand. The third division takes in foot, leg, thigh, pelvis and lumbar vertebrae. I make this division for the purpose of holding the explorer to the limits of all supplies. In the ellipse of the chest is found all vital supplies; then from that center of life we have two branches only, one of the arm, and one of the lower limb. In each division we have five points of exploration."

It seems clear that in keeping with the idea that each human being is unique, there is no one way to view all patients. Each must be approached as an individual, and this is what you did. We all have to remember that in our quest for more and more understanding of the principles of osteopathic medicine each patient is unique. How we evaluate each patient must be determined by the patient's particular circumstances, and not by any preset formula. This is but one more item that makes osteopathy something special.

Your ongoing student,  
Raymond J. Hruba, DO, FAAO

## Dr. DiGiovanna Named "NOF/AOA Educator of the Year"

Eileen DiGiovanna, DO, FAAO, Professor and Chair of the Department of Osteopathic Manipulative Medicine at the New York College of Osteopathic Medicine (NYCOM) has been named 1995 Educator of the Year by the National Osteopathic Foundation (NOF) and the American Osteopathic Association (AOA). Dr. DiGiovanna accepted the award during a ceremony at the AOA House of Delegates meeting, July 28 in Chicago, Illinois.

Dr. DiGiovanna was nominated by the dean of NYCOM, Dr. Stanley Schiowitz, in recognition of her contributions to osteopathic medicine and education, and to public health. The award is given annually to one outstanding educator in osteopathic medicine who exemplifies and encourages the principles of osteopathic medicine. She is the 13th recipient of the NOF/AOA Educator of the Year Award.

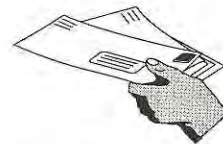
In addition to her responsibilities as Department Professor and Chair, Dr. DiGiovanna is Associate Professor for Family Practice at NYCOM and Assistant Dean for Student Affairs. She also directs NYCOM's Stress Management Program and is the immediate past president of the American Academy of Osteopathy.

During the 18 years of Dr. DiGiovanna's affiliation with NYCOM, she has written extensively, authoring several published articles and coauthoring the nationally recognized textbook, *An Osteopathic Approach to Diagnosis and Treatment*. Dr. DiGiovanna is certified by the American College of Osteopathic Family Physicians, as well as the American Osteopathic Board of Special Proficiency in Osteopathic Manipulative Medicine. She also maintains a part-time practice, both in Family Medicine as well as osteopathic manipulative medicine, at NYCOM's on-campus health center. Dr. DiGiovanna is a graduate of Ohio State University and the Chicago College of Osteopathic Medicine. She served her internship at the Doctor's Hospital in Columbus, Ohio.

Educators of the Year recipients are selected by one of the nation's colleges of osteopathic medicine on a rotating basis, in conjunction with the NOF Osteopathic Progress Fund & Seals Committee comprised of osteopathic physicians, osteopathic educators and AOA representatives.

Since 1949, NOF has been instrumental in fostering a better understanding of osteopathic theory and practice. NOF provides loans and scholarships to osteopathic medical students and administers research grant programs for scientific and clinical osteopathic research. □

## Letters to the Editor



Dear Editor

I recently attended a weekend seminar presented by Dr. F. H. Willard, PhD of UNECOM, discussing the anatomy of function and dysfunction in the lumbosacral spine. I have a few observations I would like to share after this enlightening experience.

My first observation is that our current approach to anatomy education is not preparing us to become true osteopaths. This was illustrated to me most graphically when I was forced to compare my understanding of structure/function relation, based on my "traditional" anatomy education, to what Dr. Willard presented so vividly in the photographic documentation of his dissections.

In essence, I discovered that I have a good grasp of individual structures as I have been taught them. Unfortunately, few structures exist with border zones or as isolated entities as most texts or prosections would have us believe. Rather, the anatomical structures exist in continuity to one another. While this statement seems rather obvious, my contention is that we are not developing in students a global picture of the structure/functions relationship at the most basic introductory-level anatomy.

I am not a professional educator. That being said, my perspective is that we are reinforcing an unrealistic viewpoint of the structure of the body that impedes our understanding of function, and this skewed viewpoint will diminish our ability in the practice of OMT.

An unskilled student performing a dissection reinforces falsities of sciences when unknowingly attempting to make a specimen look like a plate from Netter or Grant. A specimen prosected to demonstrate structures in an anatomy lab almost certainly has those structures separated to appear as distinct as possible for easy identification. In many cases, it would be argued that creative dissecting

leaves us believing in structures that do not exist as we would wish them to.

Preparation of the lower back muscles most certainly illustrates this point. Dr. Willard convinced me with objective evidence that the multifidus, though not classically presented as in the erector spinae group, predominates in importance in the lumbosacral/thoracodorsal fascia region.

This includes fascinating evidence that rotatores do not per se exist in the lumbar region but are in fact divisions of the multifidus in that region; not separate entities, and without the characteristic angular orientation found in higher regions, but with an almost vertical directionality. The functional implications of rotation in the L-Spine take on new meaning in light of this. Now, refer to any allopathically oriented anatomy text or atlas (virtually all) and try to confirm this. Good luck. This is but one example presented by Dr. Willard that forced me to examine my textbook understanding of anatomy.

There is a well-known story in the scientific community concerning the Miliken oil drop experiment. Miliken measured the charge on an electron by an experiment with falling oil drops. Over a period of years afterwards, reproducers of his experiment reported incrementally higher and higher values for the measured charge. Why? It was later discovered that Miliken used the wrong value for the viscosity of air. Nonetheless, scientists were hesitant to report their much larger values because they disagreed with the accepted value. The implications of this obviously address scientific integrity and the willingness to see the Emperor's new clothes.

This experience has led me to the conclusion that while we want students to have a global structure/function view of the body, we don't develop it well

when we place a disproportionate emphasis on a "Netter-fied" anatomy education.

Speaking to Dr. Willard about UNECOM's anatomy instructional approach (and expecting to hear differently) I was dismayed to learn that it was the mainstream view, with the global-structure picture being basically an extracurricular viewpoint offered by the instructors.

Few of us have the osteopathic insight of a Still, Sutherland or a Mitchell. Or, a Willard. I offer a challenge to our profession to determine whether or not my perception about anatomy education has any validity. If so, then we should consider ways to repair the problem. My recommendations would involve more clinician involvement in the anatomy curriculum as well as the development of osteopathically oriented anatomy texts and atlases to make the osteopathic outlook more accessible to the student.

John Spears  
MSUCOM '98

Dear Editor:

I am writing this letter to share my thoughts and experience with other students in osteopathic medicine. I have spent the last six months practicing at Osteopathic Associates, a practice owned by Ted Miller, DO, in the Washington, DC suburbs. This practice has been totally dedicated to osteopathic manual medicine since 1983 and has had the good fortune of treating people from all walks of life in the DC area and neighboring states. These patients have enriched our lives and, hopefully, we have enhanced theirs.

In the text, *Doctor A.T. Still in the Living*, 1950, a collection of quotes of the Founder, Dr. Truhlar begins with "An Osteopath reasons from his

knowledge of anatomy”, later in this text he quotes Dr. Still “By nature you can reason that the powers of life are arranged to suit its system of motion.”

The shadow of Dr. Still has reached many people since the 19th century. I remember my osteopathic mentor, an ex-middle weight boxer, Paul Sharkey, DO, teaching about the importance of structure and function. I can remember 20 years ago, learning the basics of OMT (as a pre-med student) above a “five and ten” store in Somersworth, NH. What was more important than learning mechanics was learning to examine nature for the heart of osteopathy. Being from the Great Granite State, I had many an opportunity to witness the movement and clarity of the streams in the woods and mountains of NH. Dr. Sharkey introduced me to palpatory skills, but he also taught me to look at the stream for the essence of the osteopathic lesion and lesson. When a tree falls across the stream, stasis and murky water follows. Decreased tissue perfusion at one level is the osteopathic lesion, at another level is the definition of SHOCK. Our work as osteopathic physicians in the clinic or in the emergency room is to reverse this spiral, enhance perfusion, restore the clarity of the stream of life, give movement to the tree and restore the movement of the stream.

In 1994, we brought two movement instructors to assist us in empowering our chronic pain patients. I asked two of my Aikido instructors, both certified Alexander Movement instructors, Pete Trimmer (Godan, 5th degree black belt) and Diana Bradley (Sandan, 3rd degree black belt) if they would be interested in teaching Alexander classes in the evening at Osteopathic Associates. Peter and Diana have over twenty years of training in both Aikido and Alexander techniques.

The Alexander Technique was developed by F. Mathias Alexander, a stage performer in Australia in 1890, (an interesting time in history). Not interfering with our natural poise is the essence of the Alexander Technique and through training, harmful habits of tension and strain are minimized.

Alexander teachers believe and teach primary control and self guidance is the inherent and intrinsic mechanism for balance and support. They teach tension or downward pull can be controlled or regulated with a gentle guided reeducation of the muscles. Actors at Juilliard, the American Conservatory Theater and the Royal Academy of Arts in London take extensive Alexander lessons as a basis for vocal and physical expression. Among Alexander’s pupils were George Bernard Shaw, Aldous Huxley and George Dewey. Physicians of the time also referred patients to Alexander and by inhibiting habitual responses minimized habitual tension/strain patterns and their harmful results.

Through the Alexander work, at Osteopathic Associates, our patients were taught to relearn movement behavior patterns that continued to cause stasis, strain and pain. We would treat a patient and improve tissue perfusion at various segmental regions and various layers, yet through therapeutic exercise or with the help of the Alexander teachers, our patients were empowered to take responsibility for their own life streams through movement and behavior.

Students/patients met weekly for six-week sessions, and classes were conducted for two separate groups. All of the students were patients with soft tissue injuries. The etiology of injuries were repetitive strain injuries, work related injuries and recovery from motor vehicle injuries. The classes were not intended to serve as experiments. They were only intended to serve as education and a means of empowerment. Twenty students/patients participated, all reporting a subjective improvement in motion and pain tolerance. Objective variables were never predetermined in a study format. Our tool for data collection consisted of the standard S.O.A.P. clinic notes. Decreased segmental restrictions were appreciated at several levels as were decreased reoccurrence of tender points. My goal for the introduction of movement instructors was not to conduct a study but only to empower and restore movement at many levels to include the

whole. In New England we were taught motion is health.

In my mind it is important that we apply osteopathic principles and concepts to health (“To find health should be the object of the doctor. Anyone can find disease.”) and think of structure and function as it moves through space. “Hobo kore dojo”, your life is your school. O’ Sensei, Morihei Ueshiba, the founder of Aikido, and A. T. Still our founder, have both passed to another space, however their teachings and students are still with us.

“A natural law is omniscient always, knowing the cause and what to do. A natural law is omnipresent with and works by the media involved in its sphere of operations. A natural law is omnipotent or a force always present within and without that is absolute concerning the organism or purpose it represents. We have the degree DO following our names or signatures; it means more than Doctor of Osteopathy and I feel that it meant something else to Dr. Still. Demonstrating Omniscience, demonstrating Omnipresence and demonstrating Omnipotence are the real meanings of DO as demonstrated and taught by our beloved founder Dr. Andrew Taylor Still. Those that have eyes let them see; those that have ears let them hear,” Robert E. Truhlar, DO, in his introduction to *Doctor A. T. Still in the Living*.

Let me end this correspondence by translating DO from the Japanese. DO literally translated means “The Way”. The great swordsman Miyamoto Musashi wrote, in his text, the Go Rin No Sho, “study the Way of many arts”, “the Way is in training”, “the Way is straight and true”. Osteopathy is not Alexander technique nor martial art, but should be shared and strengthened not weakened, with technique to empower. Osteopathy is our art and our Way, dynamic, evolving with each student, yet depending on each teacher to seek and explore its roots so that future students remain grounded with it’s history.

An ongoing student,  
William L. Bograkov, DO  
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Dear Editor:

I write in memory of Robert B. Thomas, DO, FAAO.

I became acquainted with Bob at the 1949 AOA Convention and House of Delegates Meeting in St. Louis (at that time they met concurrently). He was then President of the American Osteopathic Association. He was a committed, articulate and strong spokesman for the profession. He served 1951-1952 as President of the American Academy of Osteopathy, was the Annual Academy Lecturer (later this lecturer award was named the Thomas L. Northup Memorial Lecturer) in 1957, and received in 1969 the Andrew Taylor Still Memorial Medallion of Honor award.

I remember Bob most for his drive and persistence to obtain public

recognition of those practitioners who had developed a special proficiency in osteopathic manipulation. Many of today's DOs are unaware that the drive for AOA approval of the CSPOMM designation began in the 1950s. Margaret Barnes wrote in the 1971 *Academy Yearbook*, "Earnest efforts were proposed to establish certification in manipulative therapy, but (this was not) sanctioned by the AAO Board of Governors and AOA at that time." Bob and his committee which included, I think, True Eveleth, DO, (AOA Executive Director at that time), George Northup, DO, (either then or later Editor of the AOA), Angus Cathie, DO, (honored professor of anatomy and of osteopathic principles and practice at the Philadelphia College of Osteopathic

Medicine) and Allan Eggleston, DO (Director of the Zeller Clinic in Montreal), (all but Eveleth were past presidents of the Academy) developed a protocol fashioned after AOA requirements for certification in a specialty and made this the protocol for the *earned* recognition (not an honorary title) of Fellow of the American Academy of Osteopathy (FAAO). Bob hoped that at some future date this protocol would lead to AOA acceptance of certification in osteopathic manipulative medicine, which it did.

Much of what we enjoy today was made possible by the life of Robert B. Thomas for which we are deeply grateful.

Sincerely,  
John P. Goodridge, DO, FAAO

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# Structural and Hormonal Influences on Pelvic Mechanics in Labor and Delivery

by Melicien Tettambel, DO, FAAO

*Editor's Note: Melicien Tettambel, DO, FAAO, is an active member of AAO. She currently holds a position on the AAO Board of Trustees; Education, Long Range Planning and Postdoctoral Standards and Evaluation Committees as well as AOBSPOMM. She is board certified by the American Osteopathic Board of Obstetrics and Gynecology and in osteopathic manipulative medicine by AOBSPOMM.*

## Introduction

Anatomy and physiology form the basis for an analysis of the processes of labor and delivery. The osteopathic approach includes somatic dysfunction both as a factor to be considered in preparation of the patient, and as a result of the complex interaction of structure and physiological-chemical influences of pregnancy.

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## The Uterus

The uterus is composed of a cervix, body and fundus. A developing fetus occupies the body and fundus, a cavity made of smooth muscle layers: the endo- and myometrium. Length-tension relationships of fibers depend on uterine volume as the determining factor for the onset of spontaneous contractility. Elasticity is not enhanced, as stretching is made possible by increased myometrial viscosity and plasticity. As the uterus expands near term, the following changes occur: development of myometrial

tension, increased discharge of action potentials to initiate contractions, augmentation of the velocity of contraction waves and enhanced mechanical uterine activity. For instance, a uterus overstretched with twins incites labor; hydramnios increases myometrial tension, which facilitates contractions.<sup>1,2</sup>

Myometrial contractility is also under neurohumoral control, and can be influenced by pharmacologic agents—oxytocin, magnesium sulfate and anesthetics.<sup>3</sup> This control, which may initiate contraction waves, exerts its effect on a “myometrial pacemaker”, usually located near the right uterotubal junction. Although physiologically similar, this structure is not analogous to the cardiac pacemaker regarding electrical activity, since the uterus does not contain the same type of specialized electrical conduction system as the heart.

Just as skeletal muscle inserts into aponeurosis, the myometrium ends at the cervix, which is comprised of connective tissue. In the pregnant state, the cervix is composed of very loose collagen and occasional elastin fibrils. In labor, cervical softening occurs in the absence of any direct mechanical or local vascular connection to uterine activity. On examination of a laboring patient, it is possible to detect a dilated cervix without an engaged presenting fetal part.

The chief autonomic supply of the uterus is derived from the hypogastric plexus. Sympathetics from T10-11 supply both body and fundus; the lower

uterus, cervix and upper vagina derive motor and sensory supply from S2,3,4. The pudendal nerve, from the anterior rami of S2,3,4, innervates the perineal floor. Sympathetic and parasympathetic uterine nerves are correlated with different myometrial layers: parasympathetic for the external longitudinal myometrial excitation; inhibition for inner circularly arranged muscle. Sympathetic nerves excite the circular musculature and inhibit the outer longitudinal muscles.<sup>4</sup>

Mechanical stretching of the uterus and dilation of the cervix elicit neural reflexes which travel through posterior routes of the spinal cord to the hypothalamus, causing release of oxytocin; the reflex arcs return to the myometrium through motor nerve fibers.

Uterine and ovarian arteries are supplied with autonomic innervation that enters the uterus with the vessels. Therefore, uterine arteries are sensitive to pressure and organ position. Both adrenergic and cholinergic fibers surround uterine arteries. It is of note that labor pain (from T11-12) is often a consequence of uterine ischemia with cellular hypoxia. This is an excellent example of the nervous system as mediator in labor and delivery.

During the developing pregnancy, the increasing abdominal mass forces the diaphragm superiorly, causing a reduction in respiratory excursions, and increasing the work of breathing. Just

prior to, and during the delivery process, however, uterine vasoconstriction produced by hypoxia is more related to catecholamine action, than to primary hypoventilation of the lungs (due to the term-sized fetus within the uterus), and is independent of uterine contractility. Catecholamine levels and respiration may be directly influenced by the attitude of the patient. Childbirth preparation educates women about the process of labor and delivery to enlist her intelligent cooperation in birth. Uterine contractions result in a fall in uterine blood flow that

fetal secretions from the kidneys, lungs, and skin. These secretions contain steroids and prostaglandins, which may be precursors of maternal factors which induce labor.

Estrogen production is closely related to fetal adrenal gland secretions. Parturition is preceded by a progressive increase in estradiol concentrations in maternal peripheral plasma during the last 5 or 6 weeks of pregnancy, and by more rapid increases in concentrations of estradiol in amniotic fluid during the final 20 days of gestation. Estrogen may

in reactivity of the uterus to oxytocin. The exact biophysical mechanisms by which this hormone causes or facilitates contractions are unknown. It may act through depolarization of myometrial cell membranes in which calcium ions are removed from muscle fibers. As smooth muscle contraction depends on achieving sufficient concentrations of intracellular free calcium ions to bind with actinomyosin during the contraction process, oxytocin provides a transport mechanism for the necessary ions to perform their appropriate fluxes. Oxytocin causes little or no stimulation of smooth muscles outside the reproductive system. Although the exact route by which oxytocin moves from hypophysis to the uterus is unknown, it may be transmitted through cervical or thoracic ganglionic chains, rather than through the spinal cord. It may also originate in the fetal neurohypophysis and be transmitted to maternal plasma through the placenta. The fetal serum oxytocin concentration is highest during active labor, and lower at the time of C-section of a non-laboring uterus, and lower still after labor and delivery.

Prolactin is produced by maternal decidua and reaches extremely elevated concentrations in amniotic fluid. Control of decidual prolactin production during pregnancy is independent of the usual mechanisms controlling pituitary output (e.g., dopamine stimulating the D-2 receptor).

Relaxin exerts a more rapid inhibitor effect on myometrium than does progesterone. Although spontaneous myometrial contractility is suppressed, sensitivity to oxytocin, but not to exogenous prostaglandin is maintained. The highest concentrations of relaxin in maternal plasma are found during the first trimester of pregnancy; lower, but stable, concentrations are present during the remainder of pregnancy. The corpus luteum appears to be the major site of production of relaxin. However, relaxin may also be produced by the decidual tissue during late pregnancy, and may

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*Childbirth preparation educates women  
about the process of labor and delivery  
to enlist her intelligent cooperation in birth.*

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is proportional to the magnitude of the contraction. Strength of myometrial contractility may be decreased 50% or more when uterine blood flow is reduced, e.g., turning from the lateral to the supine position. During the expulsion of the fetus with bearing-down efforts, uterine blood flow ceases because of obstruction to arterial inflow. Prolonged hard pushing by the mother may be a cause of placental abruption or respiratory depression in the newborn.

be a stimulus to ripen the cervix, and enhances the responsiveness of the uterus to oxytocin and prostaglandin F<sub>2a</sub>. Through amniotic fluid, estrogen is given access to metabolically-active fetal membranes, which convert it to estrone sulfate. Estrone and estradiol exert direct inhibitory effects on conversion of pregnenolone to progesterone. Additionally, progesterone does not manufacture its own receptors. Hence, the induction of labor is thought to occur when an increase in estrogen production blocks progesterone receptors, and the uterus is no longer mechanically quiescent due to the inhibitory effects of progesterone.

The placenta is the major site of progesterone production after the sixth to ninth week of pregnancy. Maternal plasma concentrations of progesterone rise progressively toward term. Progesterone promotes firm binding of calcium ions in myometrium to render it unexcitable for contractions.

During the last four to five weeks of pregnancy, there is a progressive increase

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## **Local Hormonal Influences of Labor**

In addition to passive stretching due to increasing size of the developing fetus, uterine growth during pregnancy is stimulated by estrogen, progesterone, and placental hormones. Maternal-fetal communication is transmitted through the amnion, which is bathed by amniotic fluid and is contiguous with the chorion laeve (which are of fetal origin), which is contiguous to maternal decidua vera. At term, amniotic fluid is filled with

exert local effects within the uterus. Other functions of relaxin include promotion of cervical dilation at term, and increased coordination of uterine contractions during labor.<sup>5</sup>

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## Structural Features of the Maternal Pelvis

Boney components of the maternal pelvis, the four basic types of pelvic architecture, and osteopathic insights regarding birth and related injuries will be addressed.

### *Sacrum*

At birth, infants of both sexes have an S1 body that is twice as broad as the alae. The female sacrum and pelvis become broader during puberty, resulting in a greater width of the pelvic inlet. By the eighteenth year, the two lowest segments become united by bone; the union extends upward to sacral base by age 30. For structural reasons, it is important to have symmetric growth during childhood and adolescence. Since the sacrum and pelvis are quite malleable, trauma and nutritional status are important considerations in assessing the pelvis for reproductive function. Calcium and vitamin D are needed early in life, before conception, and certainly before menopause.

The sacrum continues downward and ends well below the pelvic inlet. The coccygeal end may be subject to trauma during delivery, if not before, prior to total sacral segmental union. This should be taken into consideration by the obstetrician who may note serial episodes of trauma with multiple deliveries in a woman before age 30. Conversely, in the primigravid woman above age 30, the sacrum may not be as "plastic" during labor or delivery. If forceps are necessary, the line and angle of the sacrum must be appreciated.

### *Coccyx*

Edna M. Lay, DO, FAAO has presented an osteopathic overview of the coccyx at Cranial Academy

conferences. She has outlined coccygeal dysfunction relative to obstetric deliveries.<sup>6</sup> However, some alternate points of view regarding the coccyx are offered. The position of this bone may be altered by trauma to the perineum, but it may also be altered in response to changes in the sacral curve resulting from trauma before, during, or after conception.

Local trauma to a "young" pelvis, which is formed in multiple parts, and therefore, is quite malleable, may prevent the coccyx from firmly attaching to the sacrum, resulting in ligamentous connections which do not stabilize the "tail" of the sacrum. As previously mentioned, the sacrum does not usually "unite" before the age of 30. During puberty, "growth centers" in the sacrum are exposed to stresses that may induce a local (sacral) scoliosis in the pelvic structures, with the coccyx responding to sacral influence upon future boney as well as ligamentous growth and development. If childbearing occurs after puberty but before age 30, sacro-coccygeal architecture is subject to the dictates of nutrition, altered posture due to increased weight-bearing of pregnancy, and somatic dysfunction incurred on the delivery table, if the patient struggles in improperly-placed stirrups, while lying in the lithotomy position.

### *Pubic Symphysis*

The pubic symphysis connects the two weight-bearing arches of the innominate, which transfer the weight of the trunk from the sacrum to the hips. The superior and inferior ligaments are not simply bridges to connect the rami, but also have some oblique fibers. The inferior pubic ligament provides most of the symphyseal joint stability; the superior and circumferential ligaments maintain mechanical integrity, usually allowing about 3mm of motion; up to 10 mm of motion can be noted during pregnancy. Obliquity of the fibers of the pubic ligaments allows for anterior/

posterior rotation of the rami with respect to one another on a horizontal axis, as well as superior/inferior positioning. Over time, if symphyseal lesions are not addressed, urinary problems may rise, as the urethra lies just below the symphysis. The bladder fascial attachments also adhere to the rami. As the pregnant uterus enlarges, bladder function may often be compromised. Uncorrected pubic lesions with torsion of pelvic fascias will continue to affect bladder performance after delivery and even long after childbearing has ceased.<sup>7</sup>

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## The Four Major Pelvic Types

Except for the gynecoid pelvis, females may also exhibit combinations of pelvic architecture through the combined influences of genetics, growth, trauma, and nutrition. The types are briefly described below to refresh clinical considerations of pelvic examinations in assessing cephalopelvic disproportion or possible structural reasons for prolonged labors.

### *Anthropoid*

The anthropoid pelvis is the generic "human prototype" pelvis with narrow sub-pubic arch and straight sidewalls. The transverse diameter is located well in advance of the sacral promontory. A large sacroscliac notch is present. Labor in the anthropoid pelvis follows the normal mechanism, although the fetal vertex may engage the pelvis in an occiput posterior position and remain in that position without rotating anteriorly.

### *Gynecoid*

This "classical" female pelvis is identifiable by a rounded pelvic inlet composed of a curved subpubic arch and rounded apex with ample space between the ischial tuberosities. The sacrum slopes backward, causing divergence of the pelvic basin. The patient with such a pelvis may enjoy a shorter labor, as this architecture provides ample space for the fetus to negotiate its path.

### *Android*

This "masculine" pelvis has a subpubic arch with a narrow angle and straight line. The ischial spines are prominent. Pelvic sidewalls are convergent, with a wedge-shaped inlet. The transverse diameter is situated close to a sacrum that is forward-bent towards the ischial spines. A small sacro-sciatic notch is noted; this may provide a challenge to those who attempt local/regional anesthesia for a patient with such a pelvis via pudendal block! Labor in the android type of pelvis starts with the unengaged vertex entering the inlet through the oblique diameters of the pelvis. Rotation occurs very low in the pelvis, unless the sacral promontory prohibits this maneuver; in such a case, operative delivery may be necessary.

### *Platypelloid*

A wide subpubic arch with straight and/or divergent sidewalls and a wide interspinous diameter are the major characteristics of this type of pelvis. There is a short anteroposterior and a wide transverse diameter. The sacrum has a "normal" curve; the sacro-sciatic notch is large. Provided the pelvic inlet admits the fetal head, labor and delivery are usually unrestricted. However, in a woman with a large platypelloid pelvis, the vertex may persist in the transverse position until it reaches the pelvic floor, resulting in an arrest of labor.

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## **Structural Mechanics of Labor**

After the thirty-fifth week of gestation, uterine activity may be observed to occur in an irregularly-regular pattern. As labor ensues, disorganized contractile activity becomes synchronized and predictable. The process is also assisted in the primigravida with well-toned abdominal musculature, which can be used to push the lower pole of the fetus into the pelvis. Not all multigravidas can count on these abdominal muscles to perform consistently with successive pregnancies, however.

The anterior portion of the lower uterine segment is firmly fixed by fascial and ligamentous attachments. This fact may account for the cervix moving anteriorly from its location in the posterior fornix, as observed in early labor, with cervical effacement and dilation. In early labor, the uterus moves forward in the abdomen until its long axis comes to point directly downward at right angles to the superior strait of the pelvis. The fetal body loses its posterior curvature and its vertebral column tends to straighten, depending on the amount of amniotic fluid present. This forward movement enables the force produced by the uterus to be transmitted to the cervix for impending effacement and dilation.

The fetal vertex descends into the pelvis in an attitude of flexion along the sacrum until it meets boney resistance at the sacrococcygeal platform. Then it continues downward in flexion until the biparietal diameter reaches the transverse diameter of the pelvic outlet, which means that the occiput is about to pass by the inferior border of the pubic symphysis. Next, the vertex extends by resistance (probably not by fetal choice!) of the pubococcygeal muscles and the transverse perineal muscles. If extension occurs, the larger occipital-frontal diameter must pass through the inferior pelvic plane, rather than the smaller suboccipitalbregmatic diameter, which passes through this plane when the head is well-flexed. Extension that occurs during the course of "normal" labor is at the expense of distention and disruption of structures within the perineum and endopelvic fascia beneath, and supporting the bladder. To prevent major disruption, episiotomy is performed to allow the rectum to fall away from the flexed fetal head. It may also be performed to prevent bladder prolapse in a woman who has been pushing for an extended period of time.

Prominent ischial spines may interfere with passage of the fetus through the midpelvis and outlet planes. Delivery of

the fetus through the pelvic outlet may be confined by a pubic arch that permits only the posterior component of the perineum to distend and allow delivery. Fortunately, the human pelvis is shallow, with a generous aperture of the pelvic inlet.

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## **Somatic Dysfunction as a Result of Pregnancy, Labor and Delivery**

Pregnancy may be an etiologic factor in the development of prolapsed lumbar disks in some women. Sciatica sometimes can be attributed to prolapse which occurred during or immediately after pregnancy. There can even be lower limb paresis of a severe degree, involving the ankle, hip or knee. During a postural evaluation, short leg syndromes and any history of low back injuries and/or problems should be identified and assessed prior to pregnancy, if possible.

During the course of a pregnancy, postural changes and anteroposterior curves of pregnancy should be regularly evaluated and treated.

Nerve plexus lesions can cause weakness and sensory symptoms in either polyradicular or peripheral nerve distribution in the legs. Because only anterior primary rami contribute to the plexus, proximal radiculopathy can be distinguished from a plexus lesion by electromyographic (EMG) examination of muscles supplied by posterior primary rami (paraspinal muscles), involvement of which favors a root lesion.

Roots of the sciatic nerve may be compressed in the pelvis by the fetal head, or by forceps; the motor deficit is borne by muscles which are supplied by the common peroneal fibers. A common example is the short patient with a small pelvis, carrying a large fetus, who requires forceps assistance for delivery. Such a patient usually has a straight sacrum, a flat, wide posterior pelvis with wide sacro-ischial notches. Especially in this sort of patient, complaints of leg weakness on ambulation should not be

confused with episiotomy pain. The patient should be examined for foot drop, numbness over the dorsum of the foot, and the lateral leg, as well.

Sciatica may also result from inadequate knee and hip flexion when the patient is placed in the lithotomy position, as commonly occurs before and during delivery. Extreme external rotation of the hip may result in weak dorsiflexion of the foot, with eversion.

Meralgia paresthetica results from a stretch on L2-3 in the third trimester of pregnancy; obesity may aggravate this condition. The lateral femoral cutaneous nerve runs under the outer portion of the inguinal ligament to reach the thigh. Sometimes the ligament splits to enclose the nerve. In this latter situation, hyperextension of the hip or increased lumbar lordosis will lead to compression of the nerve by the posterior fascicle of the ligament.

The obturator nerve originates within the psoas muscle from L2,3,4, emerges from the medial border of the psoas, and enters the pelvis immediately in front of the sacroiliac joint. It sweeps around the lateral pelvic wall and then passes through the obturator foramen, dividing into branches that supply the adductor, gracilis and obturator externus muscles, as well as the skin over part of the medial thigh and hip joint. This nerve may be injured during placement of the patient in the lithotomy position on the delivery table, or by compression between the fetal head and bony pelvic wall. Such an injury leads to impaired gait, because of weak adductor muscles and sensory disturbance involving the medial part of the mid- and lower thigh. Pain may also radiate from the groin down the inner side of the thigh.

The femoral nerve (within the psoas, L2,3,4) passes beneath the inguinal ligament to enter the thigh. It innervates the iliacus, sartorius, pectineus and quadratus femoris muscles. Its cutaneous branches supply the anterior and medial portions of thigh and, through the saphenous nerve, the medial portions of

the lower leg. If a patient is placed on the delivery table in an extreme lithotomy position, she may experience weakness of the quadratus muscles, along with sensory impairment over the anteromedial aspect of the thigh, and occasionally have sensory impairment of the leg to the medial malleolus, along with decreased knee jerk.

In order to make obstetrical deliveries in the hospital more "homelike", the traditional delivery table has been designated for more technically difficult deliveries. Birthing beds have become quite popular, allowing the parturient to have more freedom in positioning her body and extremities while giving birth. After ambulating about the room or hallways, she may return to her bed for delivery, which may be arranged with cushions or positioned in a chair-like manner in order to assist gravity while she is pushing. The patient may also lie on her left side (to take pressure off the great vessels) while pushing. This position also removes weight from the sacrum and allows the bi-parietal diameter of the fetal head to rotate into the path of least resistance within the maternal pelvic soft tissues.

Positioning the patient who is pushing into a prone knee-chest manner on the bed to deliver a posterior occiput fetus spontaneously, may eliminate the need for forceps rotation or operative delivery. The abdominal musculature, placed in a dependent situation, relieves the impacted head in the pelvis and guides the fetal body without exerting extra force on the emerging head.

## Conclusion

Those who care for the female patient during her reproductive years must become well acquainted with the female pelvic architecture and postural mechanics. Prior to conception, baseline structural and hormonal information assists the clinician in assessing and possibly predicting mechanical factors which may inhibit and even prevent a spontaneous vaginal delivery. Knowledge about the process

of normal labor and delivery is most beneficial to the Osteopathic physician who not only addresses somatic dysfunction resulting from spontaneous (as well as complicated) deliveries, whether this dysfunction manifests immediately in the delivery room, or after a longer time period; but also the osteopathic physician can provide an opportunity for optimal obstetrical care through identification and elimination of preexisting or acquired somatic dysfunction. A.T. Still aspired toward excellent care during pregnancy so that "Nature's team never fails to deliver all goods entrusted to its care".

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# INTRODUCING

## 1996 Convocation Program

March 27-30, 1996

*"Persistent Somatic Dysfunction:  
Causes and Treatment Strategies"*

**G. Bradley Klock, DO,  
Program Chairperson**

### Tuesday, March 26, 1996

9:00am- 5:00pm AAO Board of Governor's Meeting  
7:00pm- 9:00pm Opening Reception

### Wednesday, March 27, 1996

7:45 am- 8:00 am Welcome—Bradley Klock, DO, Program  
Chair and Boyd R. Buser, DO,  
AAO President

8:00 am- 9:00 am Somatic Dysfunction Generated  
by Joint Surface Irritation  
Frank Willard, PhD

9:00 am-10:00 am Proprioceptive Input and its Relationship  
to Generating and Treating Somatic  
Dysfunction  
Dr. Vladimir Janda

10:00 am-10:30 am Refreshment Break with the Exhibitors

10:30 am-11:30 am Somatic Dysfunction Generated by  
Visceral Problems: The Feedback Loop  
Frank Willard, PhD

11:30 am-12:30 pm Visceral Manipulation: Theory, Practice  
and its Effect on Structural Patterns  
Kenneth J. Lossing, DO

12:30 pm- 2:00 pm **Lunch**

### Workshops:

(this workshop runs one-hour and is repeated (3) times today)

2:00 pm- 3:00 pm A<sup>1</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda

3:00 pm- 4:00 pm A<sup>2</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda

4:00 pm- 5:00 pm A<sup>3</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda

(this workshop runs one-hour and is repeated (3) times today)

2:00 pm- 3:00 pm B<sup>1</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO

3:00 pm- 4:00 pm B<sup>2</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO

4:00 pm- 5:00 pm B<sup>3</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO

(this workshop runs three-hours today and is repeated tomorrow)

2:00 pm- 5:00 pm C<sup>1</sup>- Triggerpoint Injection Workshop  
Andrew A. Fischer, MD, PhD

### Thursday, March 28, 1996

8:00 am- 9:00 am Somatic Dysfunction Generated by  
Muscle and Nerve Root Irritation  
Frank Willard, PhD

- 9:00 am-10:00 am The Diagnostic and Therapeutic Roles of Trigger Point Injections  
Andrew A. Fischer, MD, PhD
- 10:00 am-10:30 am Refreshment Break with Exhibitors
- 10:30 am-11:30 am Diagnostic and Therapeutic Injections  
Timothy King, MD
- 11:30 am-12:30 pm Psychiatric Evaluation and Treatment of Patients with Persistent Somatic Dysfunction  
Richard Rosengard, DO
- 12:30 pm- 2:00 pm **Lunch**

**Workshops:**

(this workshop runs one-hour and is repeated (3) times today)

- 2:00 pm- 3:00 pm A<sup>4</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda
- 3:00 pm- 4:00 pm A<sup>5</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda
- 4:00 pm- 5:00 pm A<sup>6</sup>- Proprioceptive Retraining Workshop  
Dr. Vladimir Janda

(this workshop runs one-hour and is repeated (3) times today)

- 2:00 pm- 3:00 pm B<sup>4</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO
- 3:00 pm- 4:00 pm B<sup>5</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO
- 4:00 pm- 5:00 pm B<sup>6</sup>- Visceral Manipulation  
Kenneth J. Lossing, DO

(this workshop runs three-hours today)

- 2:00 pm- 5:00 pm C<sup>2</sup>- Triggerpoint Injection Workshop  
Andrew A. Fischer, MD, PhD

(this workshop is limited to FAAOs and Undergraduate Fellows)

- 3:30 pm- 5:00 pm Fellows Forum  
Harold I. Magoun, DO

**Friday, March 29, 1996**

- 8:00 am- 9:00 am Rheumatologic Evaluation and Treatment of Patients with Persistent Somatic Dysfunction  
Joy Schechtman, DO
- 9:00 am-10:00 am Diagnostic Radiology: What Tests are Reasonable and Why  
David Berg, DO
- 10:00 am-10:30 am Refreshment Break
- 10:30 am-11:30 am Physiatrist's Approach to Persistent Somatic Dysfunction  
James A. Lipton, DO, FAAO, LCDR, MC, USN
- 11:30 am-12:30 pm The Potential for Outcomes Research in OMM  
Michael Kuchera, DO, FAAO
- 12:30 pm- 2:00 pm **Lunch**

**Workshops**

(these workshops run for three-hours each)

- 2:00 pm- 5:00 pm D- Body Stabilization Workshop  
Terry Roach

E- "Train the Trainers" Workshop  
Nancy Edwards, Director  
AOA Payor Relations

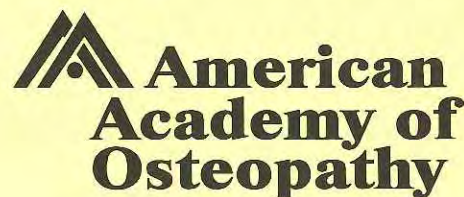
**Saturday, March 30, 1996**

- 8:00 am- 9:00 am Muscle Energy: Advantages, Shortcomings and How to Integrate the Technique  
Gary Ostrow, DO
- 9:00 am-10:00 am Counterstrain: Advantages, Shortcomings and How to Integrate the Technique  
John Glover, DO
- 10:00 am-10:30 am Refreshment Break
- 10:30 am-11:30 am HVLA: Advantages, Shortcomings and How to Integrate the Technique  
John Hohner, DO
- 11:30 am-12:30 pm New Ideas Forum
- 12:30 pm- 2:00 pm **Lunch**
- 2:00 pm- 5:00 pm Conclave of Fellows; The "New" Fellow  
Anthony Chila, DO, FAAO,  
Program Chairperson

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# From the Archives

## Mother Still

Hundreds and even thousands of osteopathic physicians revered and loved to call Mrs. A. T. Still, the wife of the founder of osteopathy, "Mother Still". She was representative of all that was best in womanhood.

Surely God in his wisdom in choosing Dr. A. T. Still as His instrument to do a great work for humanity, was not unmindful of the necessity of providing him with a mate capable of carrying her share of his burdens, to stand close by him in his trails and struggles. She was well qualified by education, a woman capable of being "Mother" to his children, a woman with ability little dreamed of by the average person with whom she came in contact, a woman whose heart was just as brave and strong as her husband's with a confidence in "her man", a loyalty in her soul that gave her strength to share with him in all his undertakings, and fight the battles of life side by side with him.

It was in the beginning days, out in Kansas, that an incident occurred which, without doubt, contributed in a most wonderful way to Dr. Still's success in life. His wife wrote to her father, an allopathic physician practicing in New York state, of the remarkable results her husband was obtaining. The father came to Kansas to investigate. After spending some time with his daughter and her family and listening to Dr. Still's reasoning, he told his daughter that he could not understand "Drew's" (Andrew's) philosophy, but felt that he had something that his own school did not have and advised her to stand by him in his undertaking. There is no doubt but that her father's advice, coupled with her love for her husband and her confidence in him, gave her strength, fortitude, courage and force of character that enabled her to stand unflinchingly with her husband in his great work. She

was a co-worker in all his trials and tribulations in the mighty battle he fought for osteopathy. All the way from those troublous times in Kansas on down through their change of residence to Kirksville, stood ever in the thickest of the battle and unwaveringly encouraged her husband in all his undertakings. Under all conditions she as the same staunch, heroic character, bearing in her quiet, humble way her portion of her husband's burdens.

To Mother Still should be given a big share of the credit for the great work. Dr. Still accomplished in giving osteopathy to the world. God ever bless her name!

The following editorials appeared in *The Journal of the American Osteopathic Association* for June, 1910, at the time of Mother Still's death: "To all of us who knew Mother Still comes the sense of a great personal loss at her passing away. When we go back to Kirksville some day and look down the familiar streets and at the big house on the hill, the old town will not seem quite the same to us, because she is gone.

"Her quiet, kindly ways; her always ready smile; her simple motherly aspect; the quiet devotion of her daily life; her unostentatious charities; all these and many more lovable qualities endeared her to us.

"She beheld our great science in its swaddling bands; saw it tended and nurtured through the lean and hungry years; endured privation, and, no doubt, often dire need, for its sake; stood faithful and undaunted by her husband's side through all the fierce turmoil of his life's great battle; gave counsel and cheer, and strength, and comfort to him in the strife.

"We thank God that she came through it all, sweet and happy, into a green and peaceful old age. A wife, a helpmate, a mother—she was all these in their truest and fullest sense.

"To those whom she has left behind, the hearts of our whole profession go out in great sympathy. Long will her memory be kept green in our hearts.—Charles Hazzard, DO"

"After an illness running over several years, death finally claimed Mother Still at her home in Kirksville, May 29. Senile nephritis had done its work. Skill and faithfulness did what might be done, worn the body away. For fifty years she had stood by her husband's side. The burial was made at Kirksville, May 30.—H.L. Chiles, DO"

"Probably comparatively few knew of the quiet sustaining force of Mother Still; how each member of the family depended on her, and gladly listened to her counsel. She had a background of osteopathic experiences that was invaluable, which, with her sound judgement, commanded great respect. Her patience and fortitude and faith all through the early days of osteopathy contributed no little to osteopathic development.

"I met her when I first went to Kirksville, and frequently saw her afterwards. The students were eager to consult with her for she was deeply interested in their work. She had a certain detachment in viewing their problems, no doubt the result of years of familiarity with osteopathy, its growth, struggles and requirements, that particularly appealed to everyone.

"No outsider can really know what sacrifice she made in order to assist in the up-building of osteopathy. Her heart and soul were in her family, and in the best interests of all. Her indomitable and sympathetic spirit, one of real understanding, was a distinct factor in the developing and organizing of osteopathy. — Carl P. McConnell, DO"

*Reference Book – The Lengthening Shadow of Dr. A. T. Still, P. 284-286.*



# AAO Case Study: Trigeminal Neuralgia

by David Coffey, DO, CSPOMM

*Editor's Note: David Coffey, DO is a 1984 graduate of the Philadelphia College of Osteopathic Medicine. Vice President of The Cranial Academy, he has been a member of both the American Academy of Osteopathy and the American Osteopathic Association for 10 years. Dr. Coffey is certified by the American Osteopathic Board of Special Proficiency in Osteopathic Manipulative Medicine as well as the American College of Osteopathic Family Physicians. He has a private practice in Montgomery, Alabama.*

## Identification:

Josephine M. is a white, 68-year-old, female supervisor at a local department store.

## Chief Complaint:

Severe left facial pain over a two-day period.

## History of Present Illness:

The patient developed severe pain in the area of the left zygoma upon awakening from sleep two days prior to presenting to her family physician. The patient has a past medical history of trigeminal neuralgia which had been controlled with subtherapeutic doses of carbamazepine, moist heat and ibuprofen. The patient was under the added stress of preparing for the onrush of Christmas shopping. Pain is spasmodic and incapacitating; moreover, it has become increasingly unremitting. Pain

begins in the area of the left zygoma and radiates to the left upper teeth and left jaw. Pain is not relieved by ibuprofen or by increasing the carbamazepine dosage. The patient had less severe episodes in the past which responded osteopathically to myofascial release of the cervical and suboccipital areas. However, this time there was no relief with osteopathic treatment directed to the suboccipital, cranio-cervical, or cervical somatic dysfunction.

## Past Medical History

Significant for rubella, varicella, sinusitis, otitis media, upper respiratory infections, pneumonia, C. difficile enteritis, UTI, urethral stenosis and degenerative arthritis of the lumbar and cervical spine.

## Past Surgical History

Significant for cholecystectomy, hysterectomy, Marshall-Marchetti Bladder repair.

## Allergies: Codeine

## Medications:

Carbamazepine 100 mg., PO, TID.  
ibuprofen 200 mg., PO, PRN pain.

## Family History:

The patient's brother died of an MI. Father with CAD. Mother healthy.

## Social History:

The patient is widowed with two children and lives alone in a home close to her married son and two grandchildren. She has had a supervisory position in a prestigious local store for over thirty years. She is first generation Italian, has never smoked and drinks wine and beer in moderation, and, is noted for her homemade ravioli.

## Physical Examination:

Vital Signs: BP = 100/60; HR = 76; RR = 20; T = 97.2 F. HEENT: PERLA, EOMI, No nystagmus. No visual field deficits. No diplopia. Cranial Nerves II through XII intact. External canals patent. Tympanic membranes intact and without injection. Septum midline. No intraoral mucocutaneous lesions. Partial dentures upper and lower. Onset of Trigeminal Neuralgia following extraction of left upper second premolar. No thyromegaly. No lymphadenopathy. There is an increase of the cervical lordotic curve with disc space narrowing. There is a general pattern of left sidebending-rotation of the cervical spine from C2 to C7 with the left occiput being posterior and inferior. The left temporal and left zygoma were externally rotated; the left sphenoid was superior, and the left orbit was widened. On the left side the upward convexity of the palate was widened and the pterygoid was superior and lateral; there was compression of both the sphenoparietal and sphenosquamous sutures. Physiologically, there existed an

overall left torsion disturbance of cranial mechanics.

**THORAX:** Heart sounds regular with occasional ectopic beats. Grade II holosystolic murmur heard best at the Apex. Lung sounds clear bilaterally. Breasts with fibrocystic disease bilaterally. No costal tenderness. Increased thoracic kyphosis with chronic Fryette Type I somatic dysfunction at T4 - T8 and T10 - T12. No scoliosis.

**ABDOMEN:** There is a right subcostal cicatrix and a midline cicatrix from the umbilicus to the pubes. Active bowel sounds x 4. No tenderness; no organomegally; no masses.

**PELVIS:** Patient with recent gynecological evaluation and rectal examination which were negative. There was no complaint of urgency, frequency or dysuria and no inguinal adenopathy. There were bounding femoral pulses bilaterally. L5 was rotated left with left sidebending. The sacrum was posterior and inferior on the left. There was a mild posterior rotation of the left innominate.

**EXTREMITIES:** The radial, popliteal and dorsalis pedis pulses were intact bilaterally. There was mild tenderness of the shoulder, elbow, knee, wrist and ankle joints at the end points of physiologic range of motion consistent with aging. There was a decrease range of motion in hip flexion, extension, internal rotation and external rotation bilaterally.

**NEUROLOGIC:** There were no focal neurologic deficits. No clonus; no Babinski. Mental status was intact; however, the patient was in severe distress secondary to incapacitating pain.

### Impression:

1. Trigeminal Neuralgia on the left.
2. Intractible pain.
3. Left torsion cranial somatic dysfunction.
4. Cervical, thoracic, lumbar, sacral and pelvic somatic dysfunction.

### Treatment Plan

1. Osteopathic treatment of the cranial left torsion somatic dysfunction.
2. Increase the carbamazepine to 500 mg./ day in three doses (200, 100, 200) tid.
3. Naproxen 500 mg., PO, bid; Propoxyphene N-100, PO, q 6H, PRN pain.
4. Osteopathic treatment to the remaining areas of somatic dysfunction.

### Course of Treatment

Following an indepth osteopathic evaluation, the course of treatment focused on correcting the left torsion pattern with emphasis on disengaging the left sphenoparietal compression first and then attacking the sphenosquamous compression.

This was accomplished using a vault hold and an indirect technique on the left sphenoparietal suture followed by decompression of the sphenosquamous suture by means of an intraoral disengagement of the lateral pterygoid. The patient's response was marked with instantaneous relief of her pain much to the amazement of the physician. The sacral left torsion pattern resolved with the cranial treatment. The treatment was concluded with myofascial release to the craniocervical junction and to the cervical, thoracic, lumbar, pelvic, and sacral somatic dysfunction, and with a compression of the fourth ventricle to facilitate cerebral spinal fluid flow. The

patient was instructed to call if the pain returned and to take the medications as prescribed for the next two days. On return visit in two days there was no left torsion pattern and the symptoms had not returned. The patient was instructed to resume her previous medications and reduce the Carbamazepine to 300 mg. / day.

**DISCUSSION:** This case demonstrates the cause and effect relationship between dental extraction, facial pain and cranial somatic dysfunction. The patient's severe facial pain follows the sensory pathway of the Maxillary division of the Trigeminal Nerve which consists of first-order neurons that synapse in the Semilunar ganglion and descend ipsilaterally as the spinal tract of V to the third or fourth cervical segment where they merge with the dorsolateral fasciculus of the cord and synapse in the ventral posteromedial nucleus of the thalamus. As it courses from the pterygopalatine fossa to the orbit, the second division of CN V passes between the maxillary tuberosity and the greater wing of the sphenoid and through the inferior orbital fissure. A torsion cranial somatic dysfunction effects the Falx Cerebri by leaning away from the superior greater wing and can inhibit venous drainage, prolonging the inflammatory process and resultant pain. A sphenosquamous compression can also effect lymphatic and venous return and increase the pain process. The patient's dramatic relief of symptoms can best be explained by removal of pressure on the Maxillary n. and the promotion of venous and lymphatic drainage. The sacral somatic dysfunction directly resulted from the left torsion and corrected with it; the remaining somatic dysfunction was chronic and compensatory in nature and secondary in importance to the primary left torsion. □

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# Manipulation of the Eustachian Tube

by J. Scott Heatherington, DO

**W**hile browsing through the 1962 AAO Yearbook recently, I reread an article by T.J. Ruddy, D.O. in which he talked about manipulating the eustachian tube and middle ear. The technique is one I have used for nearly 50 years, since having learned it from W.W. Howard, D.O. in Medford, Oregon, who had taken his specialty training under Dr. Ruddy.

The approach to manipulating the eustachian tube is through the mouth to the nasal pharynx. It is not a comfortable procedure for the patient, however, it is not painful. It may cause very temporary gagging or retching. The manipulation only requires 10-20 seconds to complete, and in acute conditions, usually does not require repeat manipulation.

Indications for the procedure include acute otitis media (simple, suppurative, and recurring), impaired hearing due to otitis media with effusion (except in nerve deafness), chronic otitis media, turgescence (plugged ear), secondary to an upper respiratory infection or altitude change. It is also beneficial immediately following adenoidectomy to prevent turgescence.

In preparing a patient for the procedure, they should be told what to expect in the way of discomfort and gagging. Advise that they breathe by panting through their mouth to reduce the gag reflex. The tendency is to breathe through the nose. Also, have them hold their own hands and to not grab yours. In children or infants, it helps to have the parent or an assistant hold their hands.

The treatment can be done with the patient seated or supine, I prefer the latter because the head is more stable. A gloved or cotted finger on the right hand, if treating the right eustachian tube, and

on the left if treating the left tube.

Stabilize the head with the non-treating hand on the forehead, have the patient open their mouth and pant through the mouth, insert the index finger into the mouth to a point near the low end of the posterior pillar of the right tonsil, from this point it is usually easier to get the finger posterior to the soft palate. Move the finger tip cephalad and slightly lateral to the fossa of Rosenmuller posterior to the opening of the eustachian tube into the pharynx. In adults, one may encounter adhesions in the area of the fossa, usually they can be lysed easily with the finger tip, place the pad of the finger over the fossa opening and use an intermittent pressure, a pumping motion. This will tend to open the tube, allowing an equalizing of atmospheric pressure on both sides of the tympanic membrane. This also allows relief of the vacuum in the middle ear which improves drainage of any mucous or liquid from the middle ear.

In cases of acute otitis media, the earlier the treatment can be administered, the more complete the relief and the less likely treatment will need to be repeated. In patients with chronic otitis and/or hearing loss, the treatment may need to be repeated several times. Treatment will not benefit those with nerve deafness or where there is lessened movement (fixation) in the ossicular chain.

In my experience, I have found that there is usually a tenderpoint about one inch anterior to the angle of the mandible on the involved side, medial to the ramus. When this tenderpoint is present, my results are usually better and the tenderpoint is usually gone following treatment.

Another indication for this treatment

is in infants and children with recurrent otitis media. In this condition, as in others, evaluating the cranium and the cervical spine is also very important. Frequently, there will be dysfunction of the temporal bone and/or C3-4 on the involved side.

## Case History #1

A nine month old male infant was brought to the office by his parents. They related that he had begun crying and screaming and pulling at his left ear about 3:00 a.m. on that day. They denied any previous history of similar behavior. Examination was somewhat difficult because the patient did not wish to be touched. The throat was not inflamed. The right ear canal and tympanic membrane were normal in appearance. The left ear canal was normal, but the tympanic membrane was mildly inflamed with moderate bulging. He had a temperature of 101° and the parents related that he had refused solid foods, but would take liquids. There was no evidence of adenopathy in the cervical area.

Our tentative diagnosis was of acute otitis media of the left ear.

Treatment was finger manipulation of the left eustachian tube. The procedure was done with the parent's assistance in restraining the child. Alternate pressure and release over the eustachian opening in the fossa Rosenmuller was accomplished.

Following treatment, the child quieted immediately, and by the time I had finished instructing the parents about aftercare, the child was asleep. No further treatment was required in this case.

→

**Case History #2** A 56-year-old female who was being treated for unrelated complaints, mentioned that her hearing had been bad since she traveled by air a few months earlier and her ears felt plugged. Examination revealed no evidence of inflammation in the ears, nose, or throat. Palpatory examination revealed some somatic dysfunction at C4-s. A tenderpoint medial to the ramus of the mandible about one inch anterior to the angle was present bilaterally.

Her diagnosis was of turgescence of both eustachian tubes.

I explained to the patient the procedure I was going to recommend, and also the possibility there might not be any improvement. She understood the situation and requested that I go ahead with the treatment.

During the treating procedure, there was evidence of soft tissue adhesions bilaterally over the fossi. These were broken and the tube was pumped. Hearing and relief from the plugged feeling was improved in the right ear immediately following the treatment. The other ear was treated on two subsequent visits with relief of symptoms. To my knowledge, there has been no recurrence of the patient's symptoms.

### Case History #3

At age six months, B.F.D. developed chronic nasal congestion, diagnosed as due to allergies. At 9-10 months of age he began having febrile illnesses and was given antibiotics, 3-4 series in a 2-3 month period. At age one year, febrile illness became more frequent and he was on antibiotics almost continuously. If he was taken off antibiotics for 2-3 days, he became febrile.

In January, 1994, at age 15 months he was seen by a DO Otorhinolaryngologist. He was put on antibiotics for six weeks using a different one every two weeks. The fever returned the third day after discontinuance.

On February 21, 1994, myringotomy tubes were placed in both ears. The fevers continued with ear pain, puffy face and drainage from both ear tubes. He was

afebrile as long as he was taking antibiotics.

X-rays of sinuses were taken in April, 1994, with diagnosis of sinusitis. Antibiotics were continued for two months following which the fever and purulent drainage from the ears recurred.

Referral was made to the Osteopathic Manipulative Medicine Department at Eastmoreland Hospital, where he was treated with cranial manipulation on two visits, and was then referred to me for Eustachian tube manipulation in late June of 1994.

Our examination revealed no inflammation on oral visualization, external ear canal was not inflamed. There was tenderness medial to the mandible and anterior to the angle bilaterally.

The treatment procedure was done bilaterally and revealed large adenoids. The right fossa felt congested, and it was difficult to identify the eustachian opening. We did a pumping over it. The left fossa was mildly congested, the eustachian opening was palpated and pumped. No adhesions were identified.

Three days after the procedure, he broke out with chicken pox and was given Zovirax which halted further lesion development. He had one additional cranial treatment a week after the eustachian manipulation.

His mother returned with him on October 11, 1994, reporting that there had been no recurrence of fever or ear drainage since June, until the past week when he was febrile one day and had ear drainage. At this time, he had had an upper respiratory infection for two weeks. He had been on antibiotics for ten days, primarily because the family went to visit a relative who was immunocompromised. She reported that he had had an upper respiratory infection twice during the summer without fever or ear drainage.

Ear examination was difficult because he remembered his last visit. There was mild drainage present. The eustachian manipulation was repeated bilaterally. The adenoids were still very large, the fossa were identified and the pumping procedure accomplished.

His mother reported in January 1995, that there had been no recurrence of fever or ear drainage.

### Summary

Manipulation of the eustachian tube is indicated in acute otitis media, recurrent otitis media, impaired hearing secondary to otitis media with effusion, chronic otitis media, turgescence (plugged ear), secondary to an upper respiratory infection or altitude change, and immediate post adenoidectomy.

The procedure requires only 10-20 seconds to do and it is uncomfortable but not painful. A pumping action with the index finger tip 4-5 times over the eustachian opening in the fossa of Rosenmuller. The procedure occasionally requires repetition. □

## In Memoriam

Rachel (Woods) Harwood, DO

Rachel (Woods) Harwood, 83 passed away November 8, 1995.

Dr. Harwood was a 1934 graduate of the Des Moines Still College of Osteopathy and Surgery and in the same year married Dr. John Woods. They practiced and taught in Des Moines until 1958 when they moved to Macon, Missouri to do a research project. Her specialty was osteopathic pediatrics. In 1963 they settled in McCall, Idaho. Dr. Rachel practiced there and was preceded in death by Dr. John in 1971. She married Ted Harwood of McCall in 1979 until his passing in 1988. From that time on, she lived in Portland, Oregon and lastly in Bellingham, Washington.

She is survived by Dr. Donald Woods, Kennewick, WA, Dr. John Woods of Mesa, AZ, Dr. Ronald Woods of Des Moines, IA, Anne (Harwood) Blackwell of Cheyenne, WY, Stan Harwood of Littleton, CO, 13 grandchildren and many great grandchildren.

Memorial contributions may be made to the Osteopathic Center for Children, 8030 Girard Avenue, LaJolla, CA 92037.

The Academy sends its deepest sympathy to Dr. Harwood's family. □

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harsh, fault-finding attitude toward others.

Conscience can be viewed as the moral link between spirit and soul. When our conscience is clear and we live according to its dictates, we have peace of mind. When it is violated, we feel guilt and shame, which are spiritual emotions arising out of our inherent knowledge of God, the Law-giver. Guilt is an anxious emotion in which we fear abandonment (loss of relationship) by the Law-giver. Shame is a depressive emotion in which we experience or grieve the loss of self-esteem by our failure to live up to the expectations of the Lawmaker. Those feelings, if left unresolved, can result in physical disease, usually mediated through the autonomic nervous system.

The clear lesson of both scripture and experience is that we are incapable of living emotionally and spiritually healthy lives on our own. Because of our sinful nature, we will make wrong choices and violate our consciences.

So how do we, as DOs, approach and treat this spiritual part of the inner man? First, we must be aware of this spiritual entity in all suffering patients. In the May issue of *Family Practice Management*, a study revealed that 95 percent of Americans believe in God and 80 percent consider religion to be "important" or "very important" in their lives.<sup>12</sup> Second, the DO needs to approach the patient in a non-threatening and unprejudicial manner and be a good listener. Third, the DO should assess patients according to their individual needs, be flexible, use encouragement and a positive, caring approach with an attitude of prayerfulness.

Dr. Larry Dossey is a medical doctor who has spent most of his professional career researching and documenting the

elements of the inner man. His recent book, *Healing Words: The Power of Prayer and the Practice of Medicine* documents his collection of worldwide research in this field. He also reveals his personal struggles and conclusions based on the findings of his research. "I found an enormous body of evidence: over 100 experiments exhibiting the criteria of good science, many conducted under stringent laboratory conditions, over half of which showed that prayer brings about significant changes in a variety of living beings."<sup>13</sup>

He stated in his book, "What was I

caring and compassion seemed to set the stage for healing. Experiments with patients showed that prayer positively affected blood pressure, wound healing, heart attacks, headaches and anxiety. Dr. Dossey stated: "These data are so impressive, I regard them as among the best-kept secrets of medical science."

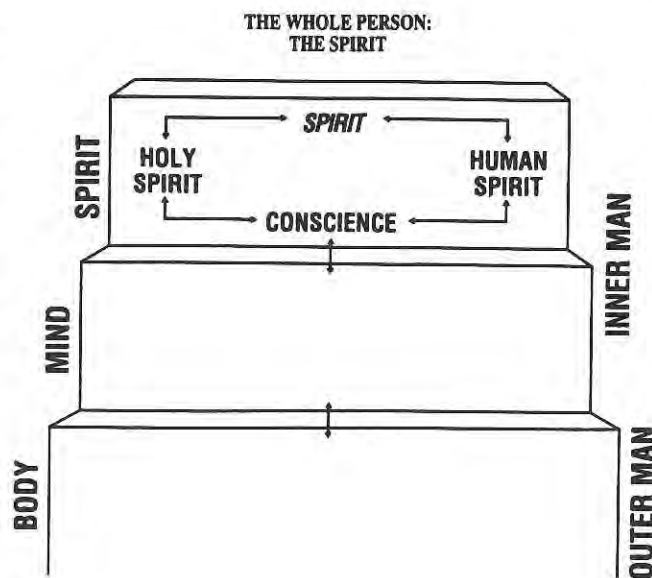
Dr. Dossey decided that not to employ prayer with his patients was the equivalent to deliberately withholding a potent drug or surgical procedure. "I felt I should be true to the traditions of scientific medicine, which means going through scientific data and not around

it." He invented a prayer ritual, asking for God's will to be done in the lives of patients he was about to see on early-morning hospital rounds, as well as his office patients. Never once did he pray for specific outcomes. "May the best possible outcome prevail" was the strategy he preferred, not specifying what "best" meant. The effects of prayer did not depend on whether the praying person was in the presence of the object of prayer or far away; healing could take place on site or at a distance.

Dr. Dossey expressed his personal belief that patients do not wish to bring

their religion into their relationship with their physician. However, in a recent study among elderly patients, 78 percent of the respondents said they would appreciate their personal physician praying with them during times of stress. Dr. Dossey believes that, in addition to providing medical expertise to patients, his job is to render emotional and psychological support as well. Patients who want more support may ask the physician to become involved at deeper levels, but it is best that they take the initiative rather than the doctor.

What is prayer? Prayer is asking God's will. The purpose of prayer is not to change His mind. Prayer, when practiced



personally going to do with this information? Was I going to pray for my patients or not? For years I had ignored prayer. I considered it an arbitrary optional frill that simply was not in the same league as drugs and surgery. I had tried to escape spiritual or religious influences in healing, fancying myself a scientific physician."

Dr. Dossey's research showed that prayer takes many forms. Results occurred not only when people prayed for an explicit outcome, but also when they prayed for nothing specific. A simple "Thy will be done" or merely an attitude of prayerfulness, an all-pervading sense of holiness and a feeling of empathy,

by healers, is usually specific (cancer cells, immune system, forgiveness). These prayers should be completed with an understanding of "Thy will be done." At that time, all parties need to be thankful and wait in positive expectation.

Prayer by repetition is asking for something for one's self; intercession is asking something for others. Prayer is the most fundamental, primordial and important language spoken by humans. Prayer starts without words and often ends without them. Prayer may be individual or communal; private or public. Prayer may be a conscious activity and it may also flow from the depths of the subconscious. Prayer may emerge in dreams, completely bypassing our waking awareness. If prayer has its roots in the subconscious, we can never fully grasp its nature, rendering a complete definition impossible.

The prayerfulness of the intercessor cannot be underestimated. The love, humility and faith in his or her heart may be the most important part of the earthly equation. While statistical evidence proves prayer to be a healing tool, it also reveals even deeper meaning of who we are and our relationship with the Almighty.

Prayerfulness permeates many cases of profound illness that improve spontaneously. Prayerfulness allows us to reach a plane of experience where illness can be experienced as a natural part of life, and where its acceptance transcends passivity. If the disease disappears, we are grateful; if it remains, that too is reason for gratitude.

A logical outgrowth of caring for patients is to pray for them. When a patient's beliefs are unknown to me, it is my personal practice to pray for a patient silently, usually while treating them. If a patient is openly Christian, a Christian friend or a family member of mine, I pray aloud with family or office assistant(s) present with all hands on the patient. Following these gatherings, extraordinary experiences and healings have taken place, cementing my beliefs and faith more than any other experience

in my life.

In summary, many current events have bolstered the reputation of our beloved profession. Recognition by the public, the government and segments of the medical establishment — all have been gratifying. The challenges to our colleges, our post-doctoral medical education system and the profession will continue to be monumental. How can we train osteopathic students to manage high patient volume practices required in managed care, while integrating a three-dimensional approach which requires time and familiarity? College administrators and faculty face awesome challenges and responsibilities, which require our help as role models.

The profession still maintains its reputation and pre-eminence for treating the musculoskeletal system and its emphasis on preventive medicine. The scientific information supporting the osteopathic manipulative treatment reveals that every structure, organ and tissue of the body can be influenced. It is also a fact that the body is a reflection of the inner man, not just muscles, bones and fascia.

Osteopathic students need to appreciate the ancient truths of our unique approach to the patient while adding current information and proven approaches to their armamentarium. They also need to appreciate that hands-on treatment not only treats the physical body, but is an avenue for diagnosing and treating the inner person.

Recent studies and publications point to fear, anger and depression submerged in the subconscious mind as the etiology of many bodily ills, including many musculoskeletal and functional problems that fail to respond to treatment. These buried painful experiences chip away at the patient's self-esteem and health. All of these emotions must be addressed and treated by an aware professional with love, hope and faith.

The founder of our profession visualized osteopathy as God's gift to man. God's spirit, present open-minded practitioners marvel at the mystery of

life through spontaneous cures; life when death was predicted; remission of pain and suffering and regeneration without scientific explanation.

The implications of Dr. Dossey's statistical research confirm the power of prayer in medicine has momentous implications for those practitioners who use prayer as a clinical tool to promote healing and reduce suffering.

In light of Dr. Still's teachings and research I have shared with you today, it is incumbent upon all of us to address and treat all the dimensions of our patients which we are uniquely equipped to do. And to recommit ourselves to the message and mission of this God-given philosophy and art.

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