

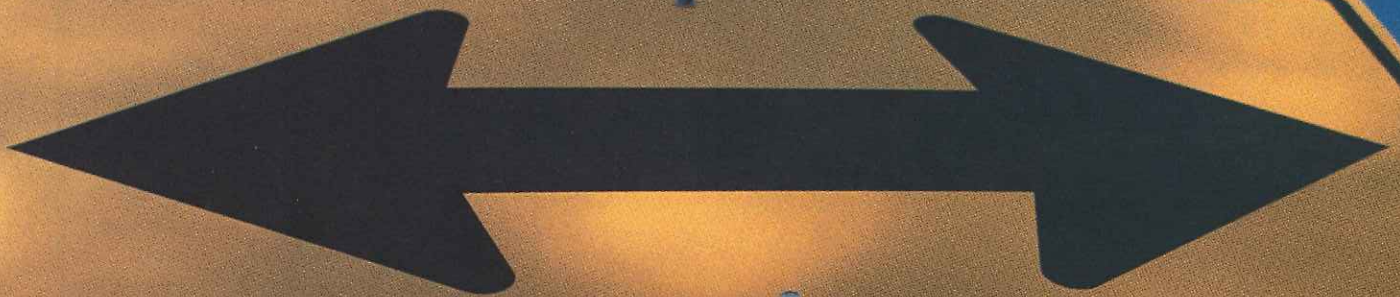
THE AAO

JOURNAL



A Publication of the American Academy of Osteopathy

VOLUME 9 NUMBER 1 SPRING 1999



Osteopathic & Allopathic Medicine:
Moving closer together or farther apart?

... see page 21

AAO's CME Calendar

American Academy of Osteopathy®

3500 DePauw Boulevard, Suite 1080

Indianapolis, IN 46268-1136

Phone: (317) 879-1881 or FAX: (317)879-0563

March

24-29

AAO Annual Convocation

The Adams Mark Hotel

St. Louis, MO

Hours: 31+ Category 1A

April

16-18

Intro to OMT & Counterstrain

AAO Headquarters

Indianapolis, IN

Hours: 20 Category 1A

May

14-16

Use of Therapeutic Exercise & OMT

AAO Headquarters

Indianapolis, IN

Hours: 20 Category 1A

15-16

Basic Percussion Vibrator

AAO Headquarters

Indianapolis, IN

Hours: 15 Category 1A

June

24-27

HVLA Intermediate Refresher

AZCOM (tentative)

Glendale, AZ

Hours: 20 Category 1A

July

23-25

Systemic Dysfunction

OSUCOM

Tulsa, OK

Hours: 20 Category 1A

August

20-22

Visceral Manip. (Abdominal/GI)

AAO Headquarters (tentative)

Indianapolis, IN

Hours: 24 Category 1A

September

22-25 (Wed PM thru Sat AM)

OMT Update

Contemporary Hotel

Orlando, FL

Hours: 23 Category 1A

October

1-3

Stimulated Ligament

Reconstruction (Prolotherapy)

UNECOM

Biddeford, ME

Hours: 20 Category 1A

24-28

AOA/AAO Convention

Moscone Convention Center

San Francisco, CA

November

12-14

Introduction to OMT/Soft tissue/

articular techniques

UNTHSC/TCOM (tentative)

Fort Worth, TX

Hours: 20 Category 1A

December

10-12

Visceral Manip. (Abdominal/GI)

AZCOM (tentative)

Phoenix, AZ

Hours: 24 Category 1A

University of Medicine and Dentistry of New Jersey – School of Osteopathic Medicine

Chairperson Department of Osteosciences

The University of Medicine and Dentistry of New Jersey-School of Osteopathic Medicine, New Jersey's University of the health sciences, seeks nominations and applications for the position of Chairperson, Department of Osteosciences, at the School of Osteopathic Medicine. This is an exciting opportunity to lead a growing department in a dynamic academic atmosphere. Osteopathic principles and practice are recognized as a vital ingredient to primary care education and practice. Responsibilities will include the administration of undergraduate Osteoscience lectures and laboratories, research programs, clinical ambulatory and inpatient services and programs at multiple locations. Candidates must be osteopathic physicians with board certification or special proficiency in osteopathic manipulative medicine and extensive experience in the teaching and practice of osteopathic principles and manipulative techniques. Demonstrated experience as a medical education and leader, with a commitment to the encouragement and support of osteopathic research is essential.

Forward nominations and/or curriculum vita to:

R. Michael Gallagher, DO, Vice
Dean UMDNJ-SOM
One Medical Center Drive
Stratford, NJ 08084

Minorities and women are encouraged to apply. UMDNJ is an Affirmative Action/Equal Opportunity Employer, m/f/h/v, and a member of the University of Health System of New Jersey.

American[®] Academy of Osteopathy

3500 DePauw Boulevard
Suite 1080
Indianapolis, IN 46268-1136
(317) 879-1881
FAX (317) 879-0563

1998-1999 BOARD OF TRUSTEES

President Melicien A. Tettambel, DO, FAAO
President Elect Mark S. Cantieri, DO
Immediate Past President Ann L. Habenicht, DO, FAAO
Secretary-Treasurer Anthony G. Chila, DO, FAAO
Trustee Boyd R. Buser, DO
Trustee Stephen D. Blood, DO, FAAO
Trustee John C. Glover, DO
Trustee John M. Jones, DO, III
Trustee Judith A. O'Connell, DO, FAAO
Trustee Dennis J. Dowling, DO
Executive Director Stephen J. Noone, CAE

Editorial Staff

Editor-in-Chief	Raymond J. Hruby, DO, FAAO
Supervising Editor	Stephen J. Noone, CAE
Editorial Board	Barbara J. Brincer, DO Anthony G. Chila, DO, FAAO James M. Norton, PhD Frank H. Willard, PhD
Managing Editor	Diana L. Finley

The AAO Journal is the official quarterly publication of the American Academy of Osteopathy, 3500 DePauw Blvd., Suite 1080, Indianapolis, Indiana, 46268-1136. Phone: 317-879-1881; FAX: (317) 879-0563; e-mail AAOSJN@aol.com; AAO Website: <http://www.aao.medguide.net>

Third-class postage paid at Carmel, IN. Postmaster: Send address changes to American Academy of Osteopathy 3500 DePauw Blvd., Suite 1080, Indianapolis, IN., 46268-1136

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

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

THE AAO JOURNAL

A Publication of the American Academy of Osteopathy

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

EDITORIAL SECTION

	Page
From the Editor	5
<i>by Raymond J. Hruby, DO, FAAO</i>	
Message from the President	6
<i>by Melicien A. Tettambel, DO, FAAO</i>	
Message from the Executive Director	7
<i>by Stephen J. Noone, CAE</i>	
Thoughts on healing: Remembering Dr. Fulford and a deeper osteopathy	10
<i>by</i>	
Dancing Elaine neck syndrome	12
<i>by Conway Chin, DO, AOBRM, ABPMR</i>	
Letter to A. T. Still	13
<i>by Raymond J. Hruby, DO, FAAO</i>	
Letters to the Editor	14
<i>Robert C. Clark, DO</i>	
<i>Martyn E. Richardson, DO</i>	
<i>Paul D. Scariati, DO, PH</i>	
We stand on the shoulders of giants in our profession! What do we see?	16
In Memoriam: Robert Grant Thorpe, DO, FAAO	17
<i>by Lia Lifgren, DO</i>	
Student's Corner: The Use of OMT in Stoke Rehabilitation	18
<i>by Shane Maxwell, MS-III</i>	

PEER-REVIEWED SECTION

1998 Scott Memorial Lecture: Osteopathic medicine: Shaping the road to the future	21
<i>by Raymond J. Hruby, DO, FAAO</i>	
A model for teaching and assessing high velocity low amplitude thrust techniques	26
<i>by Keri Wells, DO, Grad. Cert. Ed.</i>	
The management of low back pain: Short leg syndrome/postural balance ..	33
<i>by Kenneth E. Nelson, DO, FAAO</i>	

Advertising Rates for the AAO Journal

An Official Publication

of The American Academy of Osteopathy
The AOA and AOA affiliate organizations
and members of the Academy are entitled
to a 20% discount on advertising in this Journal.

Call: The American Academy of Osteopathy
(317) 879-1881 for more information.

Subscriptions: \$50.00 per year

Advertising Rates:	Size of AD:
Full page \$600 placed (1) time	7 1/2 x 9 1/2
\$575 placed (2) times	
\$550 placed (4) times	
1/2 page \$400 placed (1) time	7 1/2 x 4 3/4
\$375 placed (2) times	
\$350 placed (4) times	
1/3 page \$300 placed (1) time	2 1/4 x 4 3/4
\$275 placed (1) times	
\$250 placed (4) times	
1/4 page \$200 placed (1) time	3 1/3 x 4 3/4
\$180 placed (2) times	
\$150 placed (4) times	
Professional Card: \$60	3 1/2 x 2
Classified: \$1.00 per word (not counting a, an, the)	

Instructions to Authors

The American Academy of Osteopathy (AAO) Journal is a peer-reviewed publication 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 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 Osteopathic Manipulative Medicine, 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 three copies. 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.

6. For human or animal experimental investigations, include proof that the project was approved by an appropriate institutional review board, or when no such board is in place, that the manner in which informed consent was obtained from human subjects.

7. Describe the basic study design; define all statistical methods used; list measurement instruments, methods, and tools used for independent and dependent variables.

8. In the "Materials and Methods" section, identify all interventions that are used which do not comply with approved or standard usage.

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.

Abstract

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

Illustrations

1. Be sure that illustrations submitted are clearly labeled.

2. Photos should be submitted as 5" x 7" glossy black and white prints with high contrast. On the back of each, clearly indicate the top of the photo. Use a photocopy to indicate the placement of arrows and other markers on the photos. If color is necessary, submit clearly labeled 35 mm slides with the tops marked on the frames. All illustrations will be returned to the authors of published manuscripts.

3. Include a caption for each figure.

Permissions

Obtain written permission from the publisher and author to use previously published illustrations and submit these letters with the manuscript. You also must obtain written permission from patients to use their photos if there is a possibility that they might be identified. In the case of children, permission must be obtained from a parent or guardian.

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



The Art and Science of Medicine

It occurs to me that medicine, and perhaps especially osteopathic medicine, faces a continuing dilemma: on the one hand we like to think of medicine as a science. We prefer, if we can, to subject our practices to the scientific method, and validate these practices with appropriate data and statistics. I see no problem with this at first glance. There's nothing wrong with trying to be scientific about our endeavors.

But when we add the object of our practices - the patient - to the equation, everything changes. Suddenly variables become much more difficult to control, and many times clinical research efforts lead us to conclusions that are argumentative at best. This is especially true, I think, with research studies on manipulative medicine. This is because patients, as human beings, are unpredictable. Each is an individual (as we well know from applying our own osteopathic philosophy to patient care) and therefore difficult to subject entirely to a strict scientific method of study. The debate on how medicine best utilizes the "biomedical", or scientific model, is as old as medicine itself. Compare this with Engler's "biopsychosocial" model, wherein we add to the scientific process the psychological, social, spiritual and other factors that make up the total patient. How do we somehow combine both models and still obtain accurate, valid information about what are best practices for the

field of medicine? It seems to me that the biomedical model is held as the more ideal approach, while the biopsychosocial model best suits the practicing physician for solving the day to day problems of his or her patients.

Kathryn Montgomery Hunter, in her book *Doctor's Stories*, devotes a whole chapter to this very topic. For example this problem is not necessarily restricted to medicine. Even those involved in the basic sciences are apparently beginning to see the need to look beyond the strictly scientific approach. She says: "Recently, philosophers and historians of science have argued that the interpretive or hermeneutic methodology is characteristic of science as well. They maintain that physics and chemistry are far more context-dependent than the logical-positivists recognize and that these fields of study have more in common with anthropology, history, and literature than is customarily acknowledged."

I have yet to meet a clinician who, on the one hand, desires scientific evidence for the practice of medicine, while, on the other hand, clearly recognizes the "art" of practice - those intangibles surrounding the patient that make the daily practice of medicine workable. Montgomery has observed the same thing and sums it up as follows: "The idea of medicine as a science remains splendidly useful for its reification of disease and thus for the encouragement of greater precision in diagnosis and treatment; but

as an exclusive guide to the care of patients, clinicians for the most part have understood that it is more honored in the breach than in the observance. As myth, it goes on serving as an ideal of medical-scientific rigor which physicians hope to approximate but do not put into practice because of its potential harm to patients."

There is a need for a paradigm shift in the field of clinical research that would blend both the biomedical and biopsychosocial models. This age of managed care and HMOs could be a good time to make such a shift. It seems to me that insurance companies today are not as interested in scientific bench research. They want to know if a treatment works and if it is cost-effective. This lends itself nicely to a holistic, biopsychosocial approach to clinical research. It would work especially well for studies involving osteopathic manipulation. In other words, we would worry less about whether a cervical, thoracic or lumbar manipulation helped to lower someone's blood pressure, and focus more on the fact that patients receiving OMT fared better by some parameters than those who did not.

Now would be a good time for our profession to embark on clinical studies using this model. I am convinced we would be able to demonstrate the more effective approach to patient care available through the application of osteopathic philosophy, principles, and practices. □

Message from the President

by Melicien A. Tettambel, DO, FAAO



Leader's Challenge – Founder's Day show me Osteopathy – KCOM

[Editor's Note: *The following is the speech given by Dr. Tettambel during Founders' Day at Kirksville College of Osteopathic Medicine*]

It is a pleasure to be at KCOM to deliver a leadership challenge from the American Academy of Osteopathy to the graduating class of 2001 as well as to the rest of the profession. This year at Founder's Day, along with my fellow alumni, Dr. Michael Kuchera, dean of students, and Dr. Ronald Esper, AOA president, I, as president of the AAO should like to pose the following (the word "challenge" brought many ideas to mind – physically challenged, vertically challenged, ambulatory challenged): Are YOU osteopathically "challenged"?

Dr. Kuchera previously challenged us to light a fire of zeal for our profession. I totally agree, however, I do not know whether to present my perspective from being a piece of coal, an old log, or just a stick. I should like to think that I am addressing "sparks" who will ignite a blaze.

In osteopathy, structure and function are interrelated. Logs are needed to keep the fire going. Fire can clear paths so that new trees may be planted. Therefore, I am talking to twigs, sparks, old and new flames.

Other challenges this year have been put forth by the American Osteopathic Association to encourage diversity within our profession. The theme for this year's convention will be Women's Health Care. From a personal and professional basis I should like to point out that the Academy has promoted female leadership, and is looking forward to assisting the AOA by offering women osteopathic health care providers to participate in the program. The Academy also stands ready to assist members of our profession with the integration of osteopathic principles and techniques into all practice disciplines. It also will provide information regarding economic reimbursement for OMT. It is up to each and every one of us to promote and incorporate osteopathy into our practices, to educate third party payors as well as the public who recognize us as primary care providers and specialists.

Perhaps with some thanks to Dr. Andrew Weil and Dr. Robert Fulford, those who apply to colleges of osteopathic medicine now seek osteopathy and ways to incorporate it in the practice of medicine. Applicants have obtained information from computer web pages and "chat rooms." Philosophy as well as techniques have been discussed as pathways to improving health.

Dr. Still talked about finding that spark of health and spreading it throughout the body. This morning President McGovern suggested that the osteopathic profession evaluate wellness products. We evaluate wellness products – the anatomy and physiology of the human body – every day. We also examine their thought process, emotional level of existence, spiritual perceptions – all manifesting through the neuromusculoskeletal system. We have tried to inflict our ideas on basic science teachers. However, if we come together from our allopathic and osteopathic residency training programs, we become the structure and the function necessary to practice osteopathy as intended by Dr. Still – a philosophy of medicine incorporating science, clinical skill and palpatory diagnosis. You undergraduate students will provide function from the structure of osteopathic education offered by your teachers and clinical preceptors.

Lastly, I challenge the profession to continue to promote the concept of unity that Dr. Esper has undertaken during his presidential term. We have opportunities to unify our talents and thoughts about the practice of osteopathy. Remember that we practice a philosophy of medicine, not prescription-writing or back-cracking. OPTI programs attempt to incorporate osteopathic perspectives in clinical training programs. The Academy and the AOA will be working together to assist undergraduates in locating preceptors who incorporate OMT into medical practice, and to provide postgraduate courses to refreshment manipulative skills.

All of us sparks can collectively strike a raging blaze. Are you, or should you, be osteopathically challenged?

Message from the Executive Director

by Stephen J. Noone, CAE



AAO Plans for CME

AAO members can be proud of their specialty college's approach to advance planning of continuing medical education programs in fulfillment of its educational mission. Over the years, individual members have inquired as to how the AAO selects the courses and determines their frequency. Having just completed the Education Committee's latest meeting, I thought it would be helpful to review these matters in this column for the benefit of all Academy members.

First of all, the Education Committee spent significant time at their February weekend-long meeting thoroughly reviewing the Academy's strategic plan, evaluations of prior CME programs, summary responses from the latest CME survey of AAO leadership, revised residency program standards, prior financial history of CME programs, marketing materials and plans, host sites for programs, and proposals for new CME courses. It is in this context that the group reconfirmed the CME calendar for the remainder of 1999 and subsequently determined the schedule for 2000. The Committee then charged the AAO staff to confirm dates and sites with next year's program chairpersons. Given the limited financial and staff resources, the Academy can realistically conduct a maximum of 16 programs each year.

The single, largest CME program is the Academy's annual Convocation. The AAO president has the prerogative to nominate the program chairperson and recommend the overall theme, subject of course to approval by the Board of Trustees. In consultation with the Education Committee, the chairperson develops the CME program and identifies potential speakers. For example, at the Education Committee's latest meeting, 2000 Convocation Chairperson Carl Osborn presented his topics and speakers with the theme being "Osteopathy for the 21st Century: Restoring Life and Function to the Chronic Pain Patient." He received significant support and feedback from Committee members and will present his final program and budget to the Board of Trustees for approval at their March meeting. AAO members have come to expect a unique and challenging program at Convocation — they surely will not be disappointed with the 2000 Convocation in Cleveland.

In terms of both registrants and net revenue, the next largest CME program is the annual AOA Convention. Since the Academy is one of 13 participating AOA practice affiliates conducting programs at this Fall convention, the Education Committee encourages the program chairperson to plan didactic sessions which also will attract physicians from other affiliates and provide them with a quality, hands-on opportunity to enhance their uniquely osteopathic diagnostic and treatment skills. Hence, the program typically consists of lectures and workshops with a heavy integration of osteopathic principles and practice. For example, Program Chairperson Ross Pope has designed the 1999 AOA Convention in San Francisco around the theme "Balancing Your Practice with OMT." The result is that the AOA Convention program is the Academy's "gift" to the wider osteopathic medical profession. The Committee annually recommends the next convention program chairperson for appointment by the Board of Trustees.

For the remainder of the 2000 course calendar, the Committee reviewed all previously sponsored courses and several new programs proposed by AAO members. They used all available data in deciding which programs should be offered in the next year, including: the strong demand on the part of AAO members for visceral manipulation courses (a series of five programs); the need expressed by both osteopathic and allopathic physicians for introductory and refresher courses in osteopathic philosophy, diagnosis and treatment; the Academy's prior experience in realizing a net revenue over expenses for individual programs; and introduction of new courses. The collective wisdom of the group determined the following *tentative* calendar for the year 2000 (subject to confirmation of faculty, dates, and host sites):

January	Introduction to OMT/HVLA
February	Facilitated Positional Release
February	Myofascial Release
March	Visceral Manipulation/Manual
	Thermal Diagnosis
March	AAO Convocation in Cleveland

April	Introduction to OMT/Muscle Energy
May	Prolotherapy - Upper Extremity
June	Alleviation of Common, Chronic Pain by Optimization of Posture
July	Dx and Tx of Low Back Pain
August	OMT Update
August	Visceral Manipulation/Abdomen-GI
September	Fulford Percussion - Advanced
September	Exercise Prescription
October	AOA Convention
December	Visceral Manipulation - Thorax/Dura

considered the Academy's educational mission and AAO members' needs as they planned the CME calendar for the next two years. However, you can assist them by taking advantage of several opportunities to provide your personal input by (1) responding to the CME survey which was published in the February issue of *The AAO Newsletter*; (2) attending the Education Committee Forum, a workshop open to all at 2:15 pm on Thursday March 25 during the AAO Convocation; (3) carefully completing the course evaluation provided for all participants at the conclusion of Academy programs; and/or (4) putting your comments in writing and forwarding them to the Education Committee in care of AAO headquarters. I know that the Committee seriously considers all feedback from Academy members.

Having been present for the Committee's deliberations, I can assure you that your colleagues have thoughtfully

Affiliated organization's 1999 CME calendar...

April 13-17

77th Annual Convention
Arizona Osteopathic Medical Assoc.
Scottsdale, AZ
Hours: 40 Category 1A
Contact: (602) 266-6699
(888) 266-6699

April 24-25

*Using the powers with the patients body
IV "Lymphatics and Other Fluids"*
A.S.S.S.G.
Narragansett, RI
Hours: 13 CME Category 1A
Contact: Andrew Goldman, DO
(860) 364-5990

April 29 - May 2

102nd Annual Convention
Indiana Osteopathic Association
Merrillville, IN
Hours: 30 Category 1A
Contact: I.O.A.
(317) 926-3009 or
(800) 942-0501

April 17-19

*SCTF Intermediate Course:
Osteopathy in the Cranial Field*
Boston, MA
Hours: 22 Category 1A
Contact: Judy Staser
(817) 926-7705

April 22-25

99th Annual Convention
"Made in Oklahoma!"
Medical trends: Urban & Rural
Shangri-La Resort, Afton, OK
Hours: 26 Category 1A
Contact: OOA
(405) 528-4848

May 10-14

*Intermediate Course
Osteopathy in the Cranial Field with
Orientation Toward Pediatrics*
Osteopathic Center for Children
San Diego, CA
Hours: 36 Category 1A
Contact: (619) 583-7611

May 14-16

7th Annual Spring Seminar
Osteopathic Phys. & Surgeons of Calif.
South Lake Tahoe, NV
Hours: 20-22 Category 1A
Contact: OPSC
(916) 447-2004

May 19-23

*SCTF Basic Course
Osteopathy in the Cranial Field*
NYCOM, New York
Hours: 40 Category 1A
Contact: Judy Staser
(817) 926-7705

June 23-26

1999 OOA Annual Meeting
Ohio Osteopathic Association
Columbus, OH
Contact: Jon Wills
(614) 299-2107

July 30-August 1

1999 Annual Meeting
Colorado Society
of Osteopathic Medicine
Vail, CO
Hours: 18 Category 1A
Contact: Patricia Ellis
(303) 322-1752

August 20-22

*Psycho-Immuno-Neuro-
Toxicology Training*
Indiana Academy of Osteopathy
Indianapolis, IN
Hours: 20 Category 1A
Contact: I.A.O.
(317) 926-3009

September 24-26

10th Annual Fall Conference
Osteopathic Phys. & Surgeons of Calif.
Monterey, CA
Hours: 20-22 Category 1A
Contact: OPSC
(916) 447-2004

The principles of osteopathic structural therapy – Part IV

from the Principles of Osteopathy, by Leon E. Page DO, Published by the AAO 1952, Chapter II

In diseases of the liver and upper intestinal tract Still regarded corrective adjustment of the upper spinal area of prime importance. For structural correction in this area he suggests the following technique: "If the upper dorsal presents an imperfect alignment of the spinous processes (and often when the spinous processes are in a straight line) on careful examination we may find lateral curvature with convex bulging to the right or left, from the second to the eighth dorsal. A good method of correcting such is to hook your fingers strongly on the opposite side of the spinous processes and in the concavity of the curvature then push the neck, not the head, toward that concavity. Then I place my hand on the back of the neck and bend the neck forward and down with a rotary motion. We should adjust all ribs carefully in this region and never treat such cases more than once or twice a week for fear of soreness."

One of Still's earliest experiences with structural technique was concerned with the treatment of diarrhea. He presents the following technique for this condition: "I will now give you one of many methods that have proved effective in many cases of diarrhea which I have been called upon to treat. When my patient is a stout man, I generally stand him in a doorway and place his breast and abdomen against the jamb of the door. I then stand behind him and place my knee to the upper part of the sacrum so as to bring the spinous process of the fifth lumbar against my knee and give fairly strong pressure. Bay tak-

ing hold of his shoulders I bring his back firmly towards my knee with the object of lifting his fifth lumbar from the sacrum. Then swing him to the right and left a few times so far as to open out and loosen up all of the lumbar articulations with a view of freeing the whole nervous system of the lower spine from any impingement whatever. Now I turn my patient so he will face me with his back against the door jamb. I take him by both shoulders and push him backwards to secure good blood circulation to the upper dorsal region. Now seat the patient on a stool, stand in front of him and have him place both his arms over your shoulders. Place your arms around his body with your hands on either side of the twelfth dorsal vertebra, the place of beginning this part of the treatment. I carefully examine and adjust every dorsal vertebra and also the ribs which articulate with them. With my hands on each side of the spine, I gently but firmly draw the patient toward me and know that freedom of the blood and nerve supply is given in this region. The clavicles and cervical vertebrae now receive careful attention and adjustment, not leaving my patient until I have perfect articulation from the sacrum to the occiput. I generally inhibit the occipital nerves in the back part of the neck."

In the treatment of hemorrhoids and other types of pelvic congestion Still gave particular attention to the lumbar spinal area. After adjustment to the coccyx, he proceeds to the lumbar region, thus: "I proceed to adjust

the spine from the sacrum to the dorsal region, taking each vertebra separately. I do this by having my patient take the kneeling position with his chest on a stool about fourteen inches high. Then I grasp his thighs between my knees, holding him firmly while I rotate his body, making a fixed point at each vertebra as I go up the spine and make sure that every vertebra is in its normal articulation."

Still sums up his "philosophy of manipulations" in these words: "The philosophy of manipulation is based upon an absolute knowledge for the form and function of all bones belonging to the bony framework of the human body. We must know the position and purpose of each bone and be thoroughly acquainted with each of its articulations. Without this knowledge our work will be a failure. Simply to know that our heads are situated on the atlas on the axis, that we have seven bones in the neck, twelve in the dorsal, and five in the lumbar is of little use. We must have a perfect image of the normal articulations of the bones we wish to adjust. We must be critically certain that we know all articulations of the bones of the whole system. We must know how the blood is supplied and when that arterial blood has done its work; we must know how it returns and what would be an obstruction."

Still regarded the body as a structural unit and treated the organism as a whole. Although his methods were specific and direct he did not neglect

continued on page 39

Thoughts on healing: Remembering Dr. Fulford

Long before entering medical school, I knew I wanted to do some form of hands-on healing. I knew that true physician/healers from every time and place had to have developed some measure of the lifelong process of spirituality, depth and healing within themselves to be able to convey the same to their patients. By spirituality, I meant self or soul knowledge and ultimately God knowledge, which manifested itself in serving the great oneness and continuum we call all creation.

Osteopathic manipulative medicine was the obvious choice. Though my father had died when I was a little boy, both he and an uncle had been osteopathic physicians and general practitioners in the best sense of the terms. Reading Dr. Andrew Taylor Still's four books produced a deep recognition and resonance within me, offering and expanding my vision and hopes to even greater horizons. Dr. Still's philosophy and unswerving, boundless energy rang true, and reflected the depth, receptivity and fidelity to this truth which he maintained throughout his life. He was a light to himself, his patients, and the generations of osteopathic physicians who followed him. I was profoundly inspired, and was propelled forward to undertake the long haul through college, graduate school and osteopathic medical school.

As a freshman medical student, I immediately began asking everyone, everywhere I could, "Who are the most spiritual physicians out there and when could I learn from them?" Several names came up, but the one

unanimous reply wherever I asked was "Dr. Fulford"! But in the same breath, they would add, "But he is a tough nut to crack, and he does not take students." The enthusiasm, immediacy and energy with which everyone agreed about this old Dr. Fulford only served to fire me up to meet him as soon as possible. So, I signed up for the 1986 AAO Convocation in my sophomore year, knowing he would be there. My life was about to deepen dramatically.

Having lived most of my years in the tropics, Ohio in March was cold, rainy and dreary. But my inner self was unswayed and lit with enthusiasm and new hopes as I attended this conference, and what was to be the first of many thereafter. I enjoyed the students, physicians and speakers, and caught a glimpse or two of the old doctor (then in his eighties), but felt kind of shy and could not figure out a way to meet him. He was genuinely quiet and humble, reflecting his inner strength and wisdom. I asked the question that probably countless students everywhere have grappled with: How does a lowly medical student meet a big shot in the profession? I would get my answer very soon.

During one of the afternoon workshop times that the Academy wisely and generously provides at every convocation, I wandered into one of the large rooms filled with treatment tables, students and physicians, bubbling with the noise and enthusiasm of discovery, learning and sharing. It was busy enough, but my eye was immediately drawn to the most crowded corner of the room.

There were probably a hundred students gathered around a simple table, looking, for all the world, like a swarm of bees. In the center of the swarm was a single man, his head bowed over his patient, an island of peace in a sea of faces. It was Dr. Fulford, in a scene and setting which would repeat itself right up to his final days.

I found myself pulled right into the crowd and effortlessly wound up exactly at his right side. Students were as jammed together as they could be, and stood on tables and chairs straining to get a glimpse of the old man. A young lady was lying on the table, not quite knowing what to expect from the old man or the crowd. He looked at me, and we exchanged an immediate recognition of knowing what was happening on a very deep level. In what took only a few seconds, Dr. Fulford silently passed his hand a few inches over her body, then gently touched the center of her sternum, over her heart. She burst into tears with that enormous input and shift of energy, and her whole aura changed and brightened. The students reacted in a spectrum of emotion: from amazement and wonder, to a sense of having witnessed something very special, and of having been touched in some way themselves. Most of them shook their heads, not understanding, but wanting to. Each looking for a simple technique to take back home. Dr. Fulford had touched and treated her deeply, on a purely energetic level, reacting throughout her body, mind and soul; and it was bewildering, to say the least, for anyone who could not see or sense that. Soothing

Fulford and a deeper osteopathy

the student, he was about to enlighten and challenge everyone even more.

He and I turned to each other and smiled. He knew that I had "seen" what he did, as has been my gift since childhood, and my excitement was palpable. My heart pounded as I gathered up the courage to blurt out the words in front of the large crowd, "Dr. Fulford, you are a spiritual physician! Would you favor us with a talk on how we might become spiritual physicians, too"?

A hush fell over the crowd as he emphatically began by saying, "To be a spiritual physician, you must first get up every morning at three a.m. for the rest of your lives and meditate two and a half hours on the Light of God." His words hit home. I was so excited, I burst out, "I have been doing that since I was a teenager"! He smiled, turned to me and continued "This is a type of tithe, which is found in every tradition in every age, of giving at least one tenth of one's possessions to a higher spiritual Truth, the Universal One." He took a moment to let that bombshell sink into the group, who, at this point, looked absolutely astounded. As if this was not enough, he continued "And, you must live a good life, a pure life, if you are to convey purity and healing to your patients. You all look to me for techniques, but I constantly repeat and repeat again: it is not technique that counts. Only purity of heart, purity of intent counts"! He gently took me by the arm and led me away. He had told them everything they needed to know. The troops were speechless.

From that moment on, we shared

every available moment we had together, at conferences and at his home in Tucson and then in Ohio. At one AAO Convocation, we turned around our name tags and wrote "Purity of Intent" on them, to inspire us (and raise some smiles) even more. As we both evolved, we shared our inner experiences with each other and encouraged each other to dig deeper. We shared our respective, life-long love and study of the works of Dr. Walter Russell, who had been a friend of Dr. Sutherland's years ago. "Rhythmic, balanced interchange" had been a favorite inspirational saying of Drs. Russell, Sutherland, and Fulford, as well as some of Dr. Sutherland's students, had used it in their lives and writings. We shared many ideas, hopes, and dreams together including writing and traveling. For years he expressed the desire to come and live with us in Florida during the winters, but his wife's failing health in a nursing home would not allow him to leave for any length of time. He remained a "sincere seeker after Truth" and selfless giver all his life.

In line with the above words, I had the good fortune to meet Dr. Charles Still, whose father was also Dr. Charles Still, whose father was Dr. A. T. Still. I asked Dr. Charles Still about his grandfather: Was it true, as I had suspected all along, that Dr. A. T. Still had been this incredibly spiritual man, as every page of his writings bear witness? Did he meditate, as his "visions in the night" suggested, and did he diagnose and treat on an energetic level? Dr. Charles affirmed my thoughts by saying that he had personally witnessed his grandfather

practicing meditation, simply and humbly, in his deep love for Truth and God, with no religious affiliation or affectation. Dr. A. T. Still used to conduct meditation sessions with groups of friends, as well. He could clearly see a person's aura, inner lights and energies, and treated people accordingly. He was a visionary in every sense of the term. It was a common experience for him to show up at people's homes, unannounced, exactly when there was an emergency at that home. Dr. Charles Still related also that his father treated almost everyone in a rocking chair in his office, and that Dr. A. T. Still did not even own a treatment table, but simply treated people as he found them.

I offered these few words in deep gratitude for all I have received from our profession and these great souls, and as an inspiration and challenge to our readers, both young and old. I understand that the next AAO Convocation will touch upon Dr. Fulford and these subjects. When I was hired to teach OMM at NSUCOM a few years ago, I told the dean that I hoped to inspire the students to be healers rather than highly paid technicians. He, and later the students, agreed and appreciated it. Drs. Still, Sutherland and Fulford did not write much about their inner experiences and healing on an energy level for many reasons. I think they wisely knew that their books were for the larger audiences of physicians and the general public; and if anyone wanted to "dig on" as they used to say, the appropriate time would come, and they would find what they were seeking for. □

Case Study

Dancing Elaine neck syndrome

by Conway Chin, DO, AOBRM/ABPMR-certified physiatrist, Medical Director of Rehabilitative Services at Bay Medical Center in Bay City, MI

Chief Complaint: Pain in the cervical, upper thoracic and left upper extremity areas.

History of Chief Complaint: The patient is a 28-year-old female without a significant past medical history, whose chief complaint was pain the left neck, upper back, and left shoulder areas. The pain was described as aching, progressively worsening, and persistent. This started approximately 24 hours earlier, when she participated in a look-alike dance contest. It required the contestant to dance like the character, Elaine Benes, from the television show *Seinfeld*. The dance involves exaggerated jerking motions of the neck, upper back, and extremities. The patient denied any numbness or tingling. She denied history of bowel and bladder incontinence, headaches, chest pain, fever, night sweats, weight loss, or other causes for her current condition.

Allergies: She did not have any known drug allergies.

Medications: She was taking no medications at time of visit.

Past Medical/Surgical History: No cardiac, pulmonary, endocrine, or neurological abnormalities. She is the single mother of a young child.

Social History: She is employed as a hospital social worker. She is independent in ambulation and self care skills, and exercises regularly. She does not smoke, but is a social alcohol user. She drinks 3-4 cups of coffee a day.

Physical exam: The patient was awake, alert, oriented x3, in no acute distress and cooperative for examination. She was in moderate discomfort at rest, with severe discomfort and guarding on neck movements.

Skin: Her skin was warm and dry, without erythema, warmth or swelling noted.

Neurological: Neurological exam revealed cranial nerve, motor, sensory, and muscle stretch reflex examinations to be within normal limits. No apparent memory loss observed.

Heart, lung abdomen: No abnormalities noted on observation, auscultation, or palpation.

Extremities: Extremities noted no deformities. Active range of motion of all four extremities were within functional limits. 'Spurling's sign negative bilaterally.

Musculoskeletal: Tightness and fullness of the cervical paraspinal muscles, left trapezius muscle, and left levator scapulae muscle were noted. Decreased cervical side bending to the right and rotation to the left was noted. Patient reported pulling in her left shoulder and upper thoracic areas with cervical flexion. C2 was in extension, rotated and side bent to the left. C5 and C6 were in extension, rotated and side bent to the right. She had an elevated left first rib. She had her left upper rib cage locked in exhalation. T3 was in flexion, rotated and side bent to the left.

Initial Assessment:

1. Cervical strain.
2. Somatic dysfunction of the cervical spine, upper thoracic spine, and rib cage.

Treatment Plan:

1. The patient received osteopathic manipulative therapies, which she tolerated well, without complications. Soft tissue was performed for the cervical paraspinals, trapezius, and levator scapulae muscles. Muscle energy technique was performed for the left upper rib cage. Pressure point release and counterstrain technique was performed for the left first rib. HVLA was performed to C2, C5, C6, T3, and left first rib.
2. Deep breathing and shoulder shrug exercises were reviewed with the patient for muscle relaxation.
3. She was recommended for acetaminophen for soreness as needed after OMT.

Course of Treatment: The patient noted total resolution of her symptoms. She had decreased muscle tension, pain-free active/passive cervical range of motion, and improved comfort. Post-treatment evaluation noted symmetry of the spinal structures, increased range of motion, and decreased tissue texture abnormalities. This benefit persisted even on follow-up one month later. She was instructed to follow up as needed.

Discussion: This cases reflects musculoskeletal abnormalities related to a recent popular trend. This condition does respond dramatically to osteopathic manipulative therapies, and should be a part of the treatment program. The patient was saved costs for physical therapy and medications, and she did not miss a day of work. □

Letter to A.T. Still

Dear Doctor Still,

I know from reading about your life that you were influenced by the great philosopher Herbert Spencer. You were heavily influenced by Spencer's book, *First Principles*. Spencer took the then-new theory of evolution proposed by Darwin, and was able to use the evolutionary process to explain the world in terms of structure and function, and the mutual dependence of parts. Given your principles of osteopathy, it's no wonder that you were extremely interested in Spencer's ideas.

We often say that "Life is motion" when speaking of osteopathic principles. I wonder how much Spencer influenced you in this regard. More specifically, I wonder how much your ideas of body rhythms were influenced by your reading of Spencer's

book. He devoted a whole chapter to "The Rhythm of Motion." On page 265 of his book he states: "Perhaps nowhere are the illustrations of rhythm so numerous and so manifest as among the phenomena of life.

The swallowing of food is effected by a wave of constriction passing along the oesophagus; its digestion is accompanied by a muscular action of the stomach that is also undulatory; and the peristaltic motion of the intestines is of like nature. The blood obtained from this food is propelled not in a uniform current but in pulses; and it is aerated by lungs that alternately contract and expand."

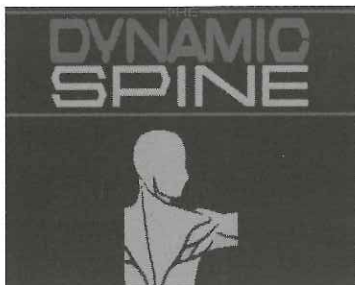
So Spencer knew of body rhythms, of the contraction and expansion of tissues. Did he give your ideas about body rhythms, perhaps even about such things as the cranial rhythmic

impulse? Speaking of the rhythm of motion later on in his book (p. 273) he says: "The universality of this principle suggests a question like that raised in foregoing cases. Rhythm being manifested in all forms of movement, we have reason to suspect that it is determined by some primordial condition to action in general.

The tacit implication is that it is deducible from the persistence of force. This we shall find to be the fact."

First Principles is a tough read. It takes a lot of concentration to focus on his words and understand the information he is trying to convey. It's worth the effort, though, if it helps us understand how you came to formulate the principles and philosophy of osteopathic medicine.

Your ongoing student,
Raymond J. Hruby, DO, FAAO□



The Dynamic Spine © *Award Winning Multimedia Educational Software*

Educational Software featuring:

- Anatomy
- Pathology
- Development
- Biomechanics
- Osteopathic Manipulative Medicine
- Radiology
- Neuroanatomy
- Anatomy museum

Multimedia CD-ROM technology:

- Interactive computer graphics
- Still photography (Anatomy museum)
- Video (Osteopathic Manipulative Medicine)
- 3D Animation (Biomechanics)

For complete information, visit our web site at www.dynamicspine.com

Letters to the Editor

Dear Ray:

My colleague, James Binker, DO and I have been enjoying the Winter 1998 issue of *The AAO Journal*. Of particular interest was the article: *Scoliosis and osteopathic manipulative treatment* by osteopathic medical student, Jennifer Weatherly.

We both disagree with her assertion that her 10-year-old patient with a visible leg length discrepancy of 1/2 inch should not be given heel lift therapy due to her age and still being in her growth years. This patient can indeed benefit from heel lift therapy. We caution that the patient should be followed very closely at intervals not to exceed once a month. "The parents should be taught by the physician (teacher) to check the child between visits and if any changes are observed to consult with the physician immediately.

Both Dr. Binker and I have treated similar cases with consistently good results. The lift may be changed or removed as growth and leg length changes occur. "The late Ira Rumney, DO, FAAO taught me this approach. He used lifts in several growing patients that I was able to follow with him during my osteopathic manipulative medicine fellowship years at KCOM.

"The keys to lift therapy in any child patient are careful and frequent follow-up and adaptation of the lift to the current findings. A lift in a child is a dynamic, on-going treatment *not* a "set it and forget it" one shot cure! We believe that anyone who thinks of heel lifts as one shot cures should never use heel lifts in any patient regardless of age!

Robert C. Clark, DO., Chair
Department of OMM
Touro University, College of
Osteopathic Medicine
San Francisco, CA

Dear Dr. Hruby:

The article by Jennifer Weatherly, *Scoliosis and Osteopathic Manipulative Treatment* in the last issue of *The AAO Journal* was very interesting, well written, and generally accurate. However, I must disagree with the opinion that lift therapy must not be used in growing children. I do not believe that correlates with the concept of preventative medicine which we espouse.

Scoliosis is often seen in growing children. It may result from anatomical abnormality, variations in posture or habits, possibly from cranial malalignment of skull bones (particularly now that infants are supposed to sleep on their back to avoid SIDs) but the most easily identified and possibly the most common cause is leg length inequality.¹

Leg length inequality may be the result of the dominance of right or left handedness, or the usual asymmetry of the human body, or may result from cranial or other asymmetry.

In any event, when there is a leg length differential in the growing child, the lumbar spine usually leans to the side of the short leg and a "C" shaped curve forms convex to the short side. This is unphysiologic and the body preserves its midline position by forming an "S" shaped curve.

The muscles on the convex side become longer, on the concave side become shorter. The bodies of the vertebrae rotate outward to the convex side and the spinous processes rotate to the concave side which tends to conceal how severe the curvature is. As the child grows these effects are worsened and become fixed.

In children, I found that the areas of most discomfort (rib pain or vague abdominal discomfort, etc.) occurred at areas supplied by the "crossover"

points. It is easy to believe that the somato-visceral reflexes are affected unfavorably throughout the entire spine. Cervical areas may be symptomatic with headaches, etc.

So why wait 10 to 12 years before correcting this?

If the leg length inequality is corrected when determined, then it will cause the sacral base to be level, the lumbar vertebrae will return to the midline, the compensatory curve will straighten, and growth will be anatomically and physiologically more normal.²

How do you accomplish this? The leg length should be determined by a properly obtained "standing pelvis" x-ray.³ Then you provide a lift of proper depth in or on the shoe. Then you use your manipulative skills to achieve "normal" spinal and cranial mechanics, and you change the bad habits. If the child spends the usual five hours watching TV insist that it be in a firm chair facing the TV, check on desk for school work. They often sit on one foot, make certain the foot is on the short leg side. If they always cross the same leg, reverse this. Insist that books be carried in back pack-not over one shoulder. Prescribe exercises and swimming and provide multivitamins plus 500 mg of sustained release Vitamin C for good bone formation. You also need to reevaluate the condition every six months. It may indicate an adjustment of the lift.

When the chimney in your house leans and cracks, the solution is to level the foundation. When a young tree is crooked, simple supports will direct its growth to a straight tall tree. I feel that the earlier one approaches this problem, the better the permanent results.

Martyn E. Richardson, DO,
FACOP
Scarborough, ME



To: Editor
 Re: Osteopathic Unity:
 If I were to be a goose,
 I would like to be Mother Goose

I did enjoy Dr. Hruby's comparison of Osteopathic Unity with the well-known managerial paradigm of a flock of geese. While entertaining, it failed to note that geese behave in such a loyal and congruous manner because they are trained from an early age in the values of geese. They do not hang with the swans and compete with the ducks. I dare say that Mother Goose is quite strict in teaching her young the way of the goose...they do not get out of goose college without a working knowledge of all things goose. If Mother Goose does not do her job, the goose cannot go on to get a special certifying competency or fellowship designation to show that, indeed, there is a better way to make a better goose. Would that this were true for Osteopathy.

As one who lovingly embraces the Osteopathic profession I find it ludicrous to be asked to demonstrate external unity in a profession that, for as long as I have been a part of it, has been unable to demonstrate internal unity. What is it that I am pledging my loyalty to? My own mother organization is currently undertaking a project to define how I am unique in comparison to my allopathic counterparts. Call me cynical, but would not it have worked better to have an a priori working definition? We have been at this for 100+ years now. Lest we forget, external unity flows directly and naturally from internal unity. Anything less is a thespian endeavor worthy of little praise.

So where does this leave us? In the Northrup lecture (1998) Dr. DiGiovanna likened the profession to a disease-infested tree. But while she

eluded that the wind was the trees great enemy, disease will do the tree in. For of itself, the wind brings good things to a healthy tree. It fosters strong root development and allows for cross-pollination and pushes the tree to expand its limbs and develop resilience. If I were an arborist, I might tell the owner of such a tree to cut it down and plant a new seedling. Yes, a pesticide could be considered but it might yield the same result over a longer period of time and pollute the ground water in the process.

Maybe the time is right to embrace a new Osteopathic paradigm: classic Osteopathic Medicine as a separate board-certified specialty of allopathic medicine. In reality, that is what we have within our profession right now — FAOs, CSPOMMs and a handful of other DOs who cling to and expound on the classical Osteopathic tenets versus the remaining DOs (majority) who have not a clue about their roots and are uninterested in finding out. By creating a certified specialty, you open the gift of classical Osteopathic Medicine to a larger pool of applicants and guarantee a more uniform, standardized level of expertise. A ten-fingered osteopath well versed in all modalities ranging from high velocity to craniosacral therapy would greet any patient seeking Osteopathic care. Additionally, as a specialty of allopathic medicine, all physicians would better know when, where, and why to refer a patient for osteopathic treatment; research could be better facilitated and focused; and the banner of osteopathy would be carried well into the twenty first century.

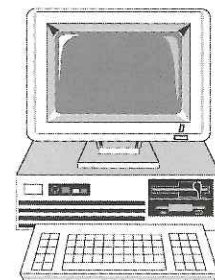
Too much to give up? Perhaps. But if one ponders the strengths of the alternative, the light does not shine too brightly.

Yours truly,
 Paula D. Scariati, DO, PH
 Fayetteville, NY



Philadelphia College of Osteopathic Medicine

is an independently run medical school. Our department of Biochemistry/Molecular Biology invites applications for one position at the level of FACULTY. (Instructor, Assistant, Associate, or Full Professor). Applicants must have a PhD or MD degree. Level of position commensurate with postdoctoral experience and demonstrated ability to obtain support for productive research. The successful applicant must have a commitment to excellence in research as well as in teaching medical and graduate students. Background in molecular biology with research interest in connective tissue diseases or nutrition will be given special attention. Applicants should send curriculum vitae, brief statement of current and future research plans, and the names and addresses of three references to:
**Eugene Mochan, PhD, DO,
 Chairman, Department of
 Biochemistry/Molecular Biology,
 Philadelphia College of
 Osteopathic Medicine, 4170 City
 Avenue, Philadelphia, PA 19131-
 1694. EOE**



Visit the
**American Academy
 of Osteopathy's
 Home on the Internet**
<http://www.aao.medguide.net>

We stand on the shoulders of giants in our profession! What do we see?

by Deborah M. Heath, DO and Albert F. Kelso, PhD

A physician is faced with new challenges every day. Each patient presents with a new story to tell and with a unique complexity. Physicians even welcome "my most rare and interesting cases" for a change of pace. In the demands of a medical practice you even come to expect the unexpected. However, it can be the challenges that are peripheral to patient care that can be most unpleasant and met with frustration. Perhaps frustration is an impetus for further action.

As an example, my patient's lawyer briefed me a few minutes before a recent court hearing saying "This is a very low key kind of hearing, nothing to worry about because there is usually very little cross-examination. You would not need any reference material, just your patient chart. You will be out in less than a half hour." I was testifying that the upper and lower extremity dysesthesia my patient experienced could be related to her thoracic herniated disc and that she required osteopathic manipulative treatment (OMT) to more than the thoracic area. The insurance lawyer was disputing that any treatment to any region other than the thoracics should not be covered. This is a familiar story for any one that treats the whole person not a diagnostic category. So my patient's lawyer led me casually into the courtroom. I was carrying Frymann's & Korr's Collected Works just in case.

I left the courtroom about two hours later. My patient's lawyer took a few minutes to establish my creden-

tials, dates of service, the diagnosis and treatment of the patient. The rest of the time the insurance lawyer asked very confrontational and penetrating questions. What studies showed the effectiveness of osteopathic manipulative treatment? What do real medical schools teach about manipulation? How many people in the general population have somatic dysfunction? How do I know that the somatic dysfunction in my patient was necessary to treat? How do I know that the treatment is not solely a placebo effect? What is the placebo effect, doctor? Needless to say, I do not remember all the questions that were asked and I did not have good answers for a lot of the questions, but I was very glad that I had Frymann's and Korr's works to refer to.

I had reviewed the books in preparation for this hearing and I had some familiarity on these subjects. The turning point in the cross examination came when I gave the definition of the placebo effect as, "a powerful demonstration of the patient's own healing power" right on page 144 in Korr's Collected Papers, volume two. The lawyer responded by saying, "I know where you are going with that. You are going to tell me that you use it, are you not?" "Yes," was my response. The lawyer stopped badgering me on references and research after that and we opened to the patient's chart.

The good news is that the patient is comfortably doing strength training five times a week now and is close to finished with her medical treat-

ment. The judge still has to rule whether or not her insurance will pay for the osteopathic treatment, the only intervention that helped her after two years of costly diagnostics, physical therapy, and heavy medications. I was relieved when the judge struck the gavel for court dismissal and very frustrated that we did not have the publications to support our use of OMT or studies on the general population and the incidence of somatic dysfunction, and the list could go on.

This week's experience in the courtroom rivaled my last week's experience in the classroom when I lectured on some of the research that has been done in osteopathic manipulative treatment. The students' frustration with our existing body of research was readily expressed! They wanted to know why the AOA or osteopathic medical schools are not supporting the necessary research. I am not sure which was worse, to be on the receiving end of their frustration or to experience my own frustration acutely in a courtroom situation!

The questions from the students and the lawyers are increasing in volume and amplitude as "manipulation" is a growing popular treatment approach. The need for clinical research studies, especially outcomes, is critical. We have heard this from Kelso and Korr for a long time. We have been anticipating the increasing scrutiny from third party payors.

I have to say that I was very grateful for the references that I could use. As I attempt to meet the daily demands of a very busy practice and

In Memoriam

Robert Grant Thorpe, DO, FAAO

by Lisa Lifgren, DO

life, I have a greater appreciation for the sacrifices made and the dedication that our leaders have. We have a long way to go, but we stand on the shoulders of many giants that have gone before us. To read the volumes by the researcher Louisa Burns, DO takes months, but she dedicated a lifetime to her profession. This is true of so many in our profession and we still have the privilege of studying with greats like V. Frymann, W. Johnston, I. Korr to name just a few. There are many that are less known but just as important to our advancement of knowledge of our profession. Unwavering support and encouragement to many students including myself continues from A. F. Kelso, working harder than ever in retirement from the Chicago College of Osteopathic Medicine.

How do we contribute to our profession? How do we help our profession grow? Our profession is based on the efforts of very gifted and special people. Based on what has been given to us by these visionaries of this century, "What do we need to know about the use of osteopathic manipulative treatment?" "What do we need to know about the incidence of somatic dysfunction in a general population?" When we are asked these questions, will the answers be cited from the literature on osteopathic research or from other professions that are confused with osteopathic medicine? Where do the human and financial resources come from? We have many challenges ahead of us. □

Dr. Robert Thorpe died January 19 at 81-years-old after succumbing to pneumonia. He was practicing osteopathic medicine in Brooklyn, NY and teaching at the New York College of Osteopathic Medicine up until a few weeks prior to his death. He will always be remembered for his incredible sense of humor both with his patients and his students. Dr. Thorpe had the incredible ability of treating his patients and curing them with his "magic hands" and his charm.

His journey of being a physician began after graduating from the Kirksville College of Osteopathy and Surgery in Kirksville, MO in 1939. Soon afterwards he was enlisted in the United States Army. After working as the medical administrator in Camp Berkeley, Texas he was initially transferred to Europe in the 51st Medical Battalion during the Invasion of Sicily. From November 1943 to October 1944 he personally triaged 40,000 wounded from hospital ships to the hospitals in the Naples area.

As soon as Robert Thorpe, DO returned to the U.S. in 1945 he started private practice in Brooklyn, NY where he specialized in osteopathic manipulative medicine for 53 years. His involvement and passion for medicine was unparalleled. He demonstrated this leadership by heading the Department of Admission of the New York Osteopathic Clinic for twenty years. From 1956 to 1979 he was also a member of the executive board of the New York Osteopathic Hospital and Clinic. Soon afterwards he became an attending physician at

LeRoy Hospital. At LeRoy he was devoted to medicine by being chairman of the Utilization Committee and Osteopathic Principles and Practice, and Physician Consultant for Utilization. In 1968, Dr. Thorpe was recognized for such devotion by being awarded a plaque for his service to the profession and community. In addition he was also honored with the Fellowship of the American Academy of Osteopathy in 1970.

In addition to the thousands of patients he has treated over the years he also gave to his medical community through his teaching. In 1964 he became a faculty member and a member of the board of directors at the Post Graduate Institute. There he conducted research, taught, and lectured. He also was an associate professor in the Department of Osteopathic Principles and Practice at the New York College of Osteopathic Medicine in Long Island since its creation in 1977.

Throughout his career, Dr. Robert Thorpe also wrote and published numerous medical articles. "The Hypothalamic Axis and its Relationship to the Sympathetic Nervous System" and "An Analysis of the Central Nature of the Musculoskeletal System in the Development, Function, Design and Biological Ecology of Homo Sapiens" are two examples of his many writings.

Dr. Thorpe is survived by his wife, June, whom he married in Naples, Italy, in August of 1944 and by his two twin daughters, Susan and Kitty who are both nurses at Coney Island Hospital. □

The Use of OMT in Stroke Rehabilitation

by Shane Maxwell, MS-III, University of North Texas Health Science Center at Fort Worth / Texas College of Osteopathic Medicine

Introduction

On a national level, strokes compromise a huge loss to society. In 1993, strokes were the leading cause of death and disability. There were 500,000 strokes leading to 150,000 deaths, which ranks it third nationwide. The remaining 3,050,000 join nearly three million current surviving stroke victims that lead lives ranging from normal full function to a high degree of permanent impairment (Fisher, p. 2). The impairments range from personality and mental changes to musculoskeletal disability. As osteopathic physicians we are in a unique position to be able to increase the quality of life for people left with these musculoskeletal disabilities by understanding and creating treatment strategies to address some of the complications of strokes. The case and discussion presented below will illustrate such an example focusing on strokes resulting in the loss of motor function in a post-acute care setting.

Case History

Chief Complaint

M.M. is a 68-year-old white female Christian minister in a wheelchair who presented to the clinic with pain in her right hip, left shoulder, and neck for one month secondary to a jarring fall.

History of Present Illness

The fall occurred one month ago while visiting a friend. Two helpers were lifting her, while in her wheelchair, down a steep set of steps when they lost control of her and she and

the wheelchair dropped several feet to the landing below. She received a jarring blow to her right hip as she slammed against a metal rail but she was not thrown from the wheelchair. The pain in her hip is described as dull but constant and keeps her from progressing toward goal of regaining ambulatory skills. She receives physical therapy twice weekly and has had OMT in the past which she finds helpful.

Review of Systems

Her review of systems reveals past history of two strokes occurring 10 years ago in which she lost motor function to both sides of her body from the neck down. She has subsequently regained use of her right arm and left leg, however, the left arm and right leg remain paralyzed. She was diagnosed with mitral valve stenosis secondary to rheumatic fever but was completely healed by God while in the hospital. She has had occasional UTI's as well as depression associated with the strokes. She is currently taking synthroid, potassium, and fosamax for hypothyroidism and osteoporosis.

Past, Family, and/or Social History

Her family medical history is positive for maternal cancer and paternal alcoholic cirrhosis.

Physical Exam

The screening exam showed obvious problems in the left shoulder and right hip as well as restriction in the neck.

The segmental exam of the left shoulder revealed a paralyzed~ atrophic arm held in internal rotation and flexion with the beginnings of a flex-

ure contracture of the hand. The shoulder showed a decreased range and quality of motion. The right leg revealed similar changes with atrophy, loss of motor response and positioning in internal rotation. Again the limb showed loss of gross motion as well as loss of quality of motion. The patient does however retain sensory function to the affected limbs. Reflexes were not checked. Her neck showed restrictions in sidebending to the right.

Assessment

The patient is losing range of motion due to tissue contracture in the stroke affected joints which will decrease her chances of achieving independent ambulation. She has somatic dysfunction of the upper extremity, lower extremity and neck.

Course of Treatment

OMT was performed on the woman, focusing mainly on the three effected areas. Soft tissue, myofascial release, and craniosacral therapy were used in all three areas. The patient responded extremely well with myofascial release. She was able to feel the tissue releases which culminated in reduction of pain and tightness, especially in the hip. She was asked to return in two weeks for additional treatment.

Discussion/ Review of Literature

Pathophysiology

One of the major problems stroke patients will face next to the basic loss

of voluntary motion is the onset of joint contractures. These contractures affect balance, posture, and remaining motor function. Many of these changes are due to the loss of motion in the joint.

When a joint loses the ability to move, changes take place in the connective tissue. The collagen networks built when a joint has motion differ greatly from those laid when no motion is present. With motion, the connective tissue is organized in loose connections with large distances between collagen cross-linkages. Without motion, the distance between cross-linkages shorten. The collagen begins to reorganize in tighter patterns causing increased tension during passive stretching motions, which will eventually lead to reduced range of motion if not treated.

This reorganization can begin to be detected within one week. The cross-linking accelerates even more when there is concomitant presence of trauma, edema, or poor circulation (Sharpless, pp. 60-61). Due to the lack of muscular contractions in the affected limb, the venous and lymphatic systems lose their major return force; therefore, edema can become a tremendous problem which only serves to accelerate the new collagen cross-linking (Sandin, p.47) and increase pain.

Due to collagen's high tensile strength, the fibers can be more easily broken down with mild tension applied over a longer time frame rather than larger forces over a shorter period of time (Sharpless, p.61). These properties encourage the use of direct myofascial release techniques at the specific site of contracture as well as full range of motion articular procedures.

Anatomy

The entire anatomy of each area of the body affected by the stroke must be considered when treatments are designed. Special attention should be paid to the arterial, venous, and lymphatic systems. Quoting from Sage

Sayings of Still (p.83), "He [the osteopath] removes the obstruction, lets the life-giving current have full play, and the man is restored to health." Removing obstructions will help the body address the edema, toxins, and ischemia referred to previously.

Biomechanics

Stroke patients who lose motor function are left to deal with several problems. These problems can be divided into primary and secondary problems. The primary problems include loss of muscle strength, changes in postural tone including hypotonicity, hypertonicity or spasticity, changes in abilities to activate proper muscle groups, and sensory changes. The secondary problems include orthopedic changes such as chronic joint dislocations, changes in soft tissue length, pain, and edema (Ryerson, pp. 18-38).

Each of these primary and secondary changes lead to further loss of motion and increased somatic dysfunction. While many of the primary changes may not be affected by OMT, it is very effective in dealing with the secondary changes as discussed later.

Differential Diagnosis

In most cases the patient will present with a clear past history of a stroke. If not, however, the osteopath may determine the cause of physical deficits through a thorough history including cardiovascular risk factors, and a complete physical examination with a good neurologic examination.

Somatic Dysfunction

Any stroke resulting in loss of motor function will contribute greatly to somatic dysfunction due to problems such a loss of range of motion and edema as discussed above. It is important for the osteopath to address the areas of primary (stroke affected joints) as well as secondary (compensatory joints and muscles) somatic dysfunction to increase the quality of life.

Treatment

After a stroke has occurred and motor function has been lost, the body, in many cases, will recover some of the lost function. Quoting from *Conn's Currents Therapy 1996*:

Neurologic recovery occurs by a number of mechanisms, including resolution of local harmful factors (such as reduction of local edema, resorption of local toxins, improved local circulation, and recovery of partially damaged ischemic neurons), and neuroplasticity... most likely by collateral sprouting of new synaptic connections and unmasking of previously latent functional pathways. Whereas most of the natural recovery occurs during the first three to six months, some patients demonstrate late improvement (p.839).

Treatment of a stroke patient should focus on several of the things discussed previously. These include; arterial supply, venous and lymphatic drainage, joint restrictions, and muscle contracture. By addressing these areas, the well-trained osteopath can affect ischemia, edema, pain, range of motion, and quality of motion, possibly opening the door to recovery of some permanent deficit, or at the least, an increase in the quality of life due to reduction of pain, edema, and contracture.

OMT

There are many techniques that may be used to create an effective treatment plan as described above. Below is a list of some techniques and the areas that they address. The list and the effects are not all-inclusive but serve to give a basic understanding of which treatments may be effective and why.

- Articular motion—taking a joint through a full range of motion and focusing on areas of restriction will increase the quality and range of motion by breaking down some areas of restriction

→

• Cranial osteopathy—this addresses the balancing of the primary respiratory force which contributes to the tissue tension of the entire body

• Diaphragm redoming—once lymphatic fluid is mobilized, the diaphragm needs to work efficiently creating the negative pressure needed to move the lymph back into the venous system

• Lymphatic pump rid the local and regional areas of excess lymph to reduce edema.

• Myofascial release—by addressing the fascial constrictions in the body, the physician can increase arterial supply, venous and lymphatic drainage⁷ reduce edema and local toxins, and reduce joint contracture

Conclusion

There is a large population of people suffering from stroke induced problems each year. The stroke patients have the ability to possibly regain some of their deficits. By understanding the basic principles, some of which include the anatomy and pathophysiology of stroke complications, osteopathic physicians can design treatment plans to address some primary and secondary problems. These treatments would be designed to help the body function as a cohesive unit helping to restore proper function.

References

1. Rakel, R.E., editor; *Conn's Current Therapy 1996*; W.B. Saunders Company, Philadelphia, Pennsylvania, 1996.
2. Fisher, Marc; *Stroke Therapy*; Butterworth—Heinemann, Boston, Massachusetts, 1995.
3. Ryerson, S., Levit, K.; *Functional Movement Reeducation*; Churchill Livingstone, New York, New York, 1997.
4. Sharpless, John W., *Mossman's: A Problem-Oriented Approach to Stroke Rehabilitation*; Charles C. Thomas, Springfield, Illinois, 1982.
5. Sandin, Karl J., Mason, Kristen D., *Stroke Rehabilitation*, Butterworth—Heinemann, Boston, Massachusetts, 1996.
6. Webster, George V., *Sage Sayings of Still*; Wetzel Publishing Co., Los Angeles, California 1993. □

If We Had Only Known!

In past years, the American Academy of Osteopathy has received surprise bequests from estates of osteopathic physicians and their families whom we had never thanked. Of course, we appreciated the gifts immensely. They revealed gracious and generous persons. And the gifts certainly help us accomplish our educational mission.

But we feel somewhat cheated because we never had the opportunity to express our gratitude for such kindness. We were unable to let the donors know how much their gifts would mean. If we had only known, we could have said, "Thank you."

And so we encourage our friends to let us know when they include the Academy in their estate plans. Not only can we express our appreciation, but we can make sure they are kept up to date with all the developments occurring here at the AAO.

TRUST 2000: A Legacy for the Osteopathic Profession was established to recognize those who include the AAO in their estate plans.

Have you named the Academy in your estate plans? If so, please use the form below to let us know. If not, will you let us send you free information on estate planning? It would be worth reading whether or not you choose to make a future gift to the Academy.

If you would like to talk with someone personally about your giving plans, contact Steve Noone, AAO's Executive Director. His number is (317) 879-1881. You will appreciate his understanding of these matters and his sensitivity to your wishes and privacy.

(Please complete and return this reply form.)

Dear Friends at the American Academy of Osteopathy:

Please send me free literature about making a will.

Please contact me about a personal visit or other assistance.

I have already provided a bequest for the Academy in my will. .

Please send me information about TRUST 2000: A Legacy for the Osteopathic Profession.

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

Phone: _____

Mail this form to: American Academy of Osteopathy, 3500 DePauw Blvd., Suite 1080, Indianapolis, IN 46268-1136.

Chairman Ross Pope and the members of the Finance Committee invite all AAO members to consider a "planned gift" to the Academy as part of the endowment program TRUST 2000: A Legacy for the Osteopathic Profession. The Committee will include planned giving hints in each issue of The AAO Newsletter and The AAO Journal. □

1998 Scott Memorial Lecture

Osteopathic medicine: Shaping the road to the future

by Raymond J. Hruby, DO, FAAO

In September of 1981, I was invited to be a faculty member for a workshop on muscle energy techniques sponsored by the American Academy of Osteopathy being presented at the Warren General Hospital in Warren, Ohio. Among the other faculty members for this workshop was Paul E. Kimberly, DO, FAAO, a man who would become a teacher, friend, colleague, and mentor to me from that time onward.

During this workshop, Dr. Kimberly gave a lecture on the history and development of osteopathic medicine. He showed a slide that depicted the development of osteopathic and allopathic schools of thought over time. These two schools of medicine were shown as separate entities traveling on parallel roads. Between the two parallel roads were occasional interconnecting lines. These lines showed

the names of prominent physicians whose philosophies and practices lent support for either the osteopathic or the allopathic approach to patient care. I was particularly impressed with this slide, and when I got home from the workshop I made a crude attempt to create a similar slide (Figure 1). Over the years I have used my feeble copy of Dr. Kimberly's slide many times while giving talks about osteopathic medicine.

This picture, however, only traces the development of these two professions until about 1980 or shortly thereafter. Recently I decided that it was high time this slide was updated. This would be an easy task, I thought. First, extend the timelines to about the year 2000. Then add some interconnecting lines with the names of those people who would be considered important influences on osteopathic medicine. I thought of people like Norman Shealy, Bernie Segal and Andrew Weil. I found it curious (and uplifting) that I could think of people in the allopathic world whose thoughts and actions supported the osteopathic profession, but none in the osteopathic world who would be supportive of the allopathic philosophy. To be realistic, however, I thought it would be appropriate to add an interconnecting line showing those DOs who graduate from osteopathic colleges and go directly into allopathic institutions for postgraduate training.

I also thought it would be interesting to add some sidebars to the picture, to show other important events or phenomena that would lend support to either the osteopathic or allopathic viewpoint. On the osteopathic side I thought of such things as the growing acceptance of integrative medicine, the increasing public demand for more holistic approaches to medical care, and the renewed interest in osteopathic principles and practices we are currently experiencing within our profession, especially among our students. On the allopathic side I thought of the development of new and powerful pharmaceutical agents, the remarkable progress made in cardiac and organ transplant surgery, and amazing developments in technology, such as the newest imaging techniques.

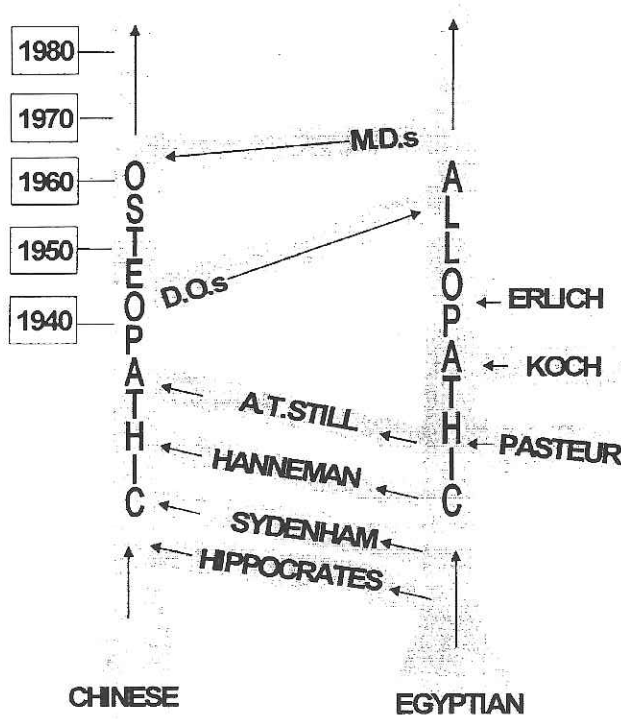


Figure 1.

All of these improvements brought my slide up to date very nicely (Figure 2). I was quite proud of myself for having accomplished this task, something I would wanted to do for a long time. But as I studied my new and improved audiovisual aid, another thought struck me: I had extended the two 'medical highways' to the year 2000 (Figure 3). But the year 2000 is almost upon us! What would these two roads look like as they head into the next millennium? Would they continue to be separate but parallel roads? Would they move closer together or perhaps farther apart? Would one road become wider than the other? Or (dare I say it?) would the two roads join together in some fashion? Could they possibly join together yet still travel as separate roads, as some highways do?

I now saw that there was a great deal more work to do on this slide. In fact, I guess you could say that I had my own version of the Y2K¹ problem! My use of the roadway as a metaphor for the osteopathic profession produced another conundrum: roads can be built in an almost infinite variety of ways. How many ways could there be to illustrate the road to the future for osteopathic medicine? As I pondered this issue, two thoughts came to mind. First, just as good roads are built by the organized efforts of expert road builders, so too must the future of osteopathic

medicine be shaped by each and every one of us working together. Second, I realized that this is my speech, so I can make the road look however I choose! But before we look at the shape of this road to the future, let us first look at some reasons why the road may look like what I am going to show you.

I think that we can say that our profession has gradually grown closer to the allopathic profession over time. In our struggle for recognition, we at first fought for parity with the allopathic profession. Our osteopathic college curricula became similar to those in allopathic colleges. As each state granted full practice rights to DOs we created licensing boards that are similar in nature to allopathic boards. The inability of DOs to obtain staff privileges in allopathic hospitals led to the development of our own parallel hospital system, followed by our own system for graduate medical education. Osteopathic certifying boards are similar in structure to allopathic ones.

By 1973 DOs had obtained full practice rights in all states, and the osteopathic profession is now recognized as equal to the allopathic profession by the government, the military, and even the American Medical Association. In recent years we have seen the opening up of allopathic residencies to DOs, along with the ability to

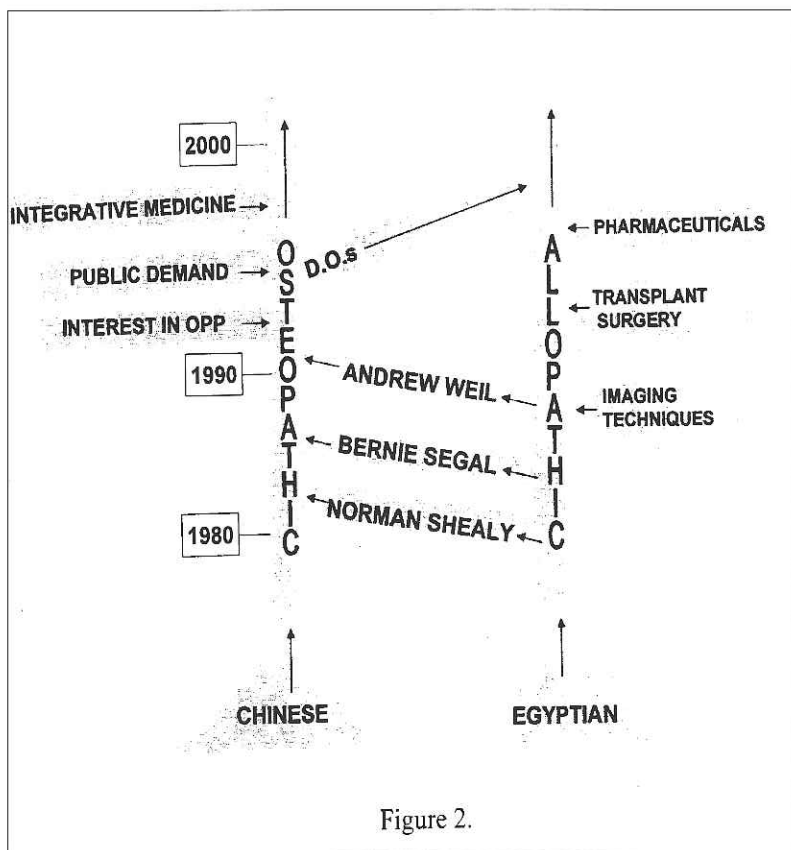


Figure 2.

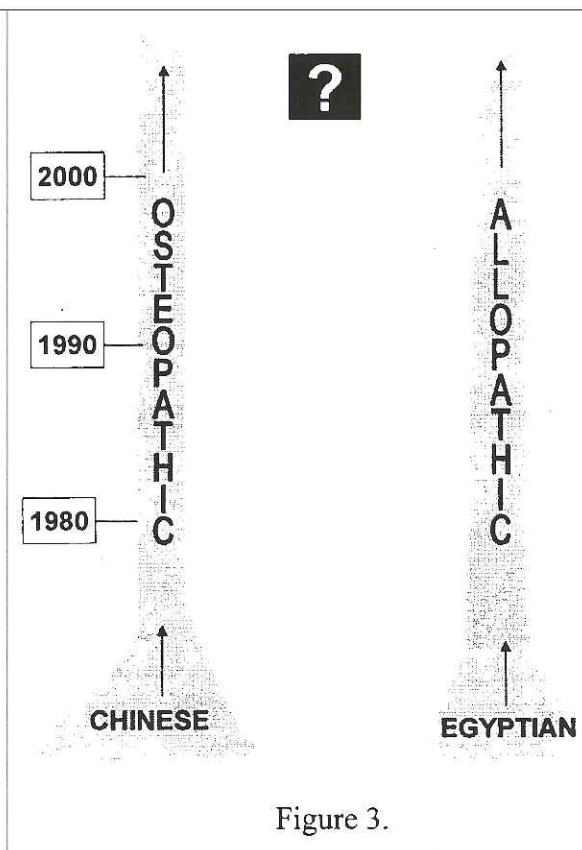


Figure 3.

¹ The "Y2K" problem (otherwise known as the "Year 2000 Problem", or the "Millenium Bug"), refers to the fact that almost all computer software programs used only two digits to designate the year (e.g., "98" instead of "1998"). A serious problem is expected to occur when the year "99" becomes "00". Computers and software that are not updated to be "Y2K compliant" will read "00" as the year 1900 instead of 2000, "01" as 1901 rather than 2001, and so on. Computers and software that cannot correctly deal with dates on or after January 1, 2000 may function improperly or not at all.

be certified by allopathic boards, and to belong to allopathic organizations.

This recognition as a fully licensed profession has not come without cost. During the decades of struggle for recognition and full practice rights, there was a de-emphasis in our colleges on osteopathic principles and practices, those methods that help to make us distinctive as a profession. This resulted in the graduating of many DOs with little or no interest or skill in distinctive osteopathic methods of practice – DOs who conducted very little research on osteopathic principles and practices, and who practiced in a manner very similar to that of allopathic physicians. Today we have a situation where the general public has difficulty perceiving the difference between a DO and an MD because they sometimes look much alike to the average patient. And the scientific community remains skeptical about osteopathic medicine, often criticizing us for the lack of credible research to support our distinctive approach to health care.

To further complicate matters, we have witnessed the proliferation of osteopathic colleges to the current level of nineteen. At the same time, with the advent of managed care, many osteopathic hospitals have either closed their doors or merged with allopathic institutions. We now have more students graduating from our colleges than the number of places available to them within our osteopathic graduate medical education system. A percentage of these graduates must, of necessity, do their graduate medical training in allopathic institutions.

All of these events seem to have prompted a new concern amongst DOs. They are worried that, although we have achieved parity with the allopathic profession, we may have lost, or at least misplaced, our identity. Indeed, in recent years we have seen a number of publications that reflect this concern about our identity.^{2,3,4,5}

So the professions *have* grown a lot closer to each other. Indeed the osteopathic and allopathic professions have become linked together in ways that may preclude their separation in the future. So how do we move into the future, linked with the allopathic profession, yet maintaining ourselves as a strong profession with a separate identity? It is obvious that we must redefine, rediscover and restate our identity, and become a strong profession around this identity, if we are not only going to survive, but also

actively shape our road to the future. How do we do this?

Let us start with the fact that Andrew Taylor Still did not discover osteopathic medicine with the intent to start another profession. Article III of the original charter of the American School of Osteopathy states that the object was “to improve our present system of surgery, obstetrics, and treatment of diseases generally, and place the same on a more rational and scientific basis, and to impart information to the medical profession, and to grant and confer such honors and degrees as are usually granted and conferred by reputable medical colleges...”⁶ Article V of the charter gave him the power to “...teach such sciences and arts as are usually taught in medical colleges, and in addition thereto, the science of osteopathy...”⁷

Doctor Still also said: “Our school was created to improve on the past. Read the charter of your school every night before you go to bed. I say ‘improve’ on old theories.”⁸

Doctor Still was rejected by the medical establishment of his time, in spite of his tremendous success in treating patients with his newly discovered methods. He founded a new medical profession because of the huge demand by the general public for his services. His original intention was only to improve the medical care of his time, and to share his knowledge with others. We see from the above quotes that he could even have granted the MD degree to his students if he had chosen to do so.

We have also noted previously that there is a strong demand on the part of the general public for a more patient-oriented, holistic approach to medical care. The allopathic profession has taken keen interest recently in approaches to patient care commonly referred to as alternative, complementary or integrative medicine. The same profession that rejected Doctor Still in 1874 now sees osteopathic medicine not as alternative medicine, but as the right combination of the science of medicine, the art of caring, and the power of touch. Osteopathic medicine meets the healthcare needs of today’s and tomorrow’s societies, and provides the rational, scientific and humane basis for health care in the 21st century.

So we see that the public wants the kind of care that osteopathic physicians have always given since the time of Andrew Taylor Still. We also see that the allopathic profession recognizes the value of this kind of care, and more and more they are asking that we teach them to be

²Gevitz N. *The D.O.’s: Osteopathic Medicine in America*. Baltimore: Johns Hopkins University Press, 1982.

³Gevitz N. ‘Parallel and Distinctive’: The philosophic pathway for reform in osteopathic medical education. *JAOA* 1994;94:328-332.

⁴Hruby RJ. Osteopathic Identity: Finding the Pony. *AAOJ*, Vol. 3, No. 4, Winter, 1993, pp. 9-13.

⁵Johnson SM, Bordinat D. Professional identity: Key to the future of the osteopathic medical profession in the United States. *JAOA* 1998;98:325-331.

⁶Still AT. *Autobiography of A. T. Still*. Kirksville: published by the author, 189

⁷, p. 168. *Ibid.*, p. 169.

⁸Truhlar, R.E.. *Doctor A. T. Still in the Living*. Cleveiland: published by the author, 1950, P. 136.

like us. If all of this is true: if we truly believe that our philosophy and principles should be the basis for all health care practitioners, and that osteopathic medicine is the best choice for medical care in the 21st century, then should we not be the ones to shape the 'medical road' to this future? Perhaps, this is what Dr. Still would have wanted in the first place.

If so, then the road to the future might just look like the one shown in Figure 4. You will note that the 'osteopathic road' is no longer just a road, but has become a superhighway. All health care practitioners are now following this single pathway in their endeavors to provide excellent care to their patients.

Some osteopathic physicians will worry that we might be swallowed up by the allopathic profession, and disappear forever. Let me state here that I try to study the history of our profession as much as I can. I have not forgotten about how our profession was persecuted in the past, and I have experienced first hand some of the prejudices against osteopathic medicine that still exist today. I agree that we must be careful as we build our way to the future, so we don't get run over on our own superhighway!

But I strongly believe we will not be swallowed up or disappear if we are a strong profession. We must always provide the strongest, most organized leadership we can for our profession. As osteopathic physicians we must be

united behind the common cause of growing and developing our profession as the health care leaders of the next century and beyond. We must always maintain the highest standards of education and practice, and produce the finest physicians in the world. In the business world, one would say that this is the difference between *servicing* lunch and *being* lunch!

Let me conclude by saying that times have certainly changed since 1874. Osteopathic physicians are uniquely positioned to be the leading health care profession in the 21st century and beyond. We must worry less about being swallowed up as a profession, or fighting more turf battles just to survive. We must concentrate on thriving as a profession, given that:

1. We have a clearly defined philosophy and set of principles upon which our practices are based.
2. The general public strongly demands the kind of care osteopathic physicians have always been able to provide.
3. Other health care professionals recognize this and want to be like us.

If this is how we truly believe all physicians should practice, now and in the future, then let osteopathic physicians take the lead, let osteopathic medicine get the credit for it, and let us make certain that if there is only one 'medical highway' in the future it is the right one — the osteopathic one! □

UNECOM – Biddeford, ME

The University of New England is recruiting an osteopathic physician to both provide clinical services and to assist in our teaching program. Clinical Services will include practice at University Health Care, our on-site health centers and on an inpatient basis at area hospitals. Your participation in our educational program will include the use of practice settings for educational opportunities for both pre-clinical and clerkship students as well as didactic classroom instruction. The successful candidate will be an osteopathic manipulative medicine specialist with special interest and certification in the practice and teaching of OP&P, including training in indirect and direct manipulative modalities. Certification in family practice and institutional experience are desired but not required. The University of New England College of Osteopathic Medicine offers a competitive salary and benefits program. Interested persons should forward resume and cover letter by March 31, 1999 to: Paul Loiselle, University of New England Health Center, 11 Hills Beach Road, Biddeford, ME 04005.

UNE is an Equal Opportunity/Affirmative Action Employer.

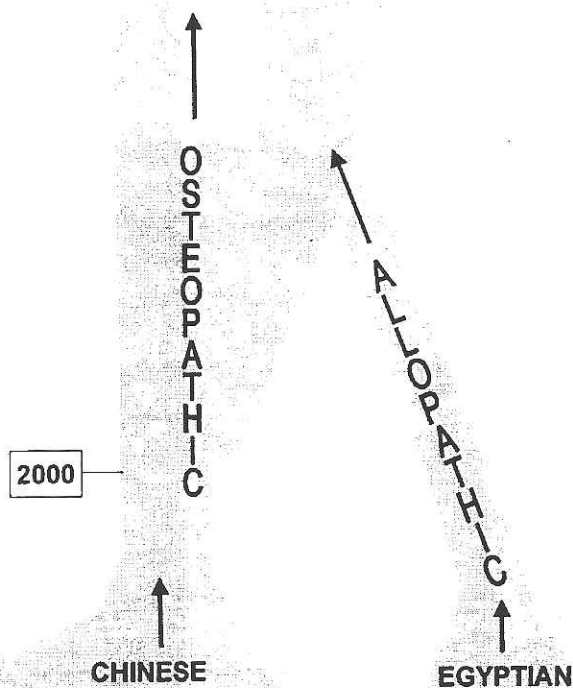


Figure 4.

Introduction to OMT and Counterstrain in Indianapolis, IN



Date of the Course: April 16-18, 1999
Days of the Week: Friday-Sunday
Location: AAO Headquarters
CME Hours: 20
Maximum # of participants: unlimited
Discounts Available: Residents/Interns/Students

Program Faculty:
 John C. Glover, DO, Chair
 John M. Jones, III, DO
 Mark S. Cantieri, DO, FAAO

Program:

Friday, April 16, 1999

- 7:30 am Registration
- 8:00 am Introduction to Course and Faculty
- 8:15 am History and Philosophy of Osteopathy
- 10:00 am Introduction to OMT
- 10:30 am Osteopathic Terminology, Palpatory Diagnostic Parameters, Barrier Concept
- 11:15 am Principles of Counterstrain Technique
- 12:00 nn Lunch
- 1:00 pm Spinal Biomechanics
- 2:00 pm Anterior Cervical Spine Diagnosis and Treatment
- 2:30 pm Lab Practice Session
- 3:30 pm Posterior Cervical Spine Diagnosis and Treatment
- 4:00 pm Lab Practice Session
- 5:00 pm Adjourn

Saturday, April 17, 1999

- 8:00 am Anterior Thoracic Diagnosis and Treatment
- 8:30 am Lab Practice Session
- 9:30 am Posterior Thoracic Diagnosis and Treatment
- 10:30 am Lab Practice Session
- 11:00 am Rib Diagnosis and Treatment
- 11:30 am Lab Practice Session
- 12:30 pm Lunch
- 1:30 pm Anterior Lumbar Diagnosis and Treatment
- 2:00 pm Lab Practice Session
- 3:00 pm Posterior Lumbar Diagnosis and Treatment
- 3:30 pm Lab Practice Session
- 4:30 pm Review
- 5:00 pm Adjourn

Sunday, April 18, 1999

- 8:00 am Coding for Diagnosis and Reimbursement
- 9:00 am Anterior Pelvis Diagnosis and Treatment
- 9:15 am Lab Practice Session
- 10:00 am Posterior Pelvic Diagnosis and Treatment
- 10:30 am Lab Practice Session
- 11:15 am Complications and Contraindications
- 11:30 am Complete Treatment Approach
- 12:30 pm Summary and Review
- 1:30 pm Adjourn

Registration Form

Intro to OMT and Counterstrain, April 16-18, 1999

Full Name _____

First Name for Badge _____

Street Address _____

City _____ State _____ Zip _____

Daytime Phone # _____

AOA # _____ College/Year Graduated _____

I require a vegetarian meal

Registration Rate:

	Prior to Mar. 16	After Mar. 16
AAO Member	\$550	\$650
Intern/Resident/Student	\$275	\$375
AAO Non-Member	\$650	\$750

AAO accepts VISA OR MASTERCARD

Credit Card # _____

Cardholder's Name _____

Date of Expiration _____

Signature _____

Form of Payment: check credit card

For Hotel Reservations, call:

Drury Inn

I-465 & U.S. 421

Phone: (317) 876-9777

Room Rate: \$56.95 (Reservation Code #0415)
 (includes breakfast and cocktail hour)

A model for teaching and assessing high velocity low amplitude thrust techniques

by Keri Wells, DO, Grad. Cert. Ed. (University Teaching and Learning)

Any clinical skill that involves the manipulation of the bony protector of the spinal cord is not a skill to be applied without the operator's full understanding of biomechanics and the anatomical structures involved.

It is the responsibility of educators to develop a teaching and assessment program that aspires to the highest possible standards. 'Superficial learning' is not an acceptable practice in this most important discipline.

Teaching and examining the clinical skill, the HVLA thrust can be an exhaustive task. It is the responsibility of instructors to provide a structured framework for the student to work within. Students want and need to be taught how to apply HVLA techniques safely and successfully. They want and need to know what to do to improve their skills.

The structured framework offered in this paper is one that provides clear instructions for students on why they need to learn, and includes information about how they will be examined.

Lecture presentation

Experts are not always the best teachers of complex manual skills.

Dreyfus & Dreyfus (1986) describe experts as those who have incorporated each of the factors (steps) of the skill into their performance to the extent that they can no longer identify the factors or the steps. (de Tomyay & Thompson 1987) (1)

I have been witness to many lectures where experienced practitioners demonstrate techniques. The questions that immediately follow the demonstration include: What did you do? How did you do that? Having performed the technique hundreds of times, very often the practitioner is at a loss to explain the sequence of events, the steps that occurred.

While such an incidence demonstrates expertise, it is of absolutely no value to the novice if he/she cannot be

taught how to do the same. The novice practitioner wants to know how they can do the technique, how they can become an expert.

Educators of any clinical skill will be aware that in order to develop skills of this nature students require many different abilities. Before preparing lectures and practical sessions to teach such skills, lectures must ask themselves: *How can I be sure the students are taking notice of all the key pieces of information? How can I be sure the students are safe while they practice these skills?*

It is most important to be consistent when presenting techniques so that students develop their understanding of how each criteria, as described, is important to the success of the technique overall.

With regard to the last criteria *explanation of technique*, the ability to explain how each technique works is fundamental to developing understanding. An explanation of how each techniques works should be included in every demonstration.

Irrespective of which techniques are taught, all of them can be subdivided into the following criteria. For example:

Supine Thoracic HVLA

Right facet closed ('closed' in the sagittal plane)

Lesion

T4/5 extended rotated and sidebent right, **ERS right**. The inferior facet on the right side of T4 has moved inferiorly, posteriorly and medially relative to the inferior left facet on T4 and the superior right facet on T5.

Restriction

T4/5 Flexion, rotation and sidebending left.

Patient position

Supine, arms crossed, hands clasping shoulders. Right hand on left shoulder i.e. thoracic spine sidebent left.

Operator position

At the side of the table, in this case the right. Level with patient's waist. Operator's left foot forward, right foot back, easy stance, knees slightly bent.

Contacts

Place the knuckles and thenar eminence of your right hand on the Transverse process of T5. The spinous process (SP) lay in your palm. Operator's abdomen presses against pillow at patient's elbows. Support the patient's head with left forearm, left hand on posterior and lateral aspect of the patient's left shoulder.

Lock up description

Using patient's upper torso as a long lever. Sidebend and rotate left, then flex the patient down to *address the restriction barrier in the T4/5 joint*. Make sure you are localized by getting patient to push the elbows up into you, while you palpate the localized forces with your right hand. (Rotation can be introduced by moving the patient's elbows to the left of the midline). *Take the weight of the patient on your back foot as you lift/roll them. Your right hand acts as a fulcrum*

Thrust

Ask patient to breathe in and out. At the end of exhalation deliver a quick short sharp thrust in a posterior superior direction, at approximately 45 degrees i.e. into flexion, sidebending and rotating left. *Retest.*

Explanation of technique

By sidebending and rotating left, then flexing the patient and adding a superior and posterior directed thrust, the thrust will open the relatively closed facet on the right of the T4/5 joint. The right inferior facet on T4 will move superior, anteriorly and laterally, relative to the left inferior facet on T4, and the superior facet of T5 on the right.

Bibliography

- Greenman PE. 1989, *Principles/ of Manual Medicine*, Baltimore, Williams and Wilkins.
- Kimberley PE. 1980, *Principles of Manipulative Treatment and Illustrative Procedures for Specific Joint Mobilization*, Third Edition, Department of Osteopathic Theory and Methods, Kirksville College of Osteopathic Medicine, Missouri.
- Waltons W.J., 1972, *Textbook of Osteopathic Diagnosis and Technique Procedures*, Colorado Springs, American Academy of Osteopathy.

Examining Competence in HVLA Technique Skills

When setting either a practical or written exam to assess students' competence, the instructor must ask him/

herself the following questions: *What is the best method of examining these students? What competencies are being tested by this method of assessment? Is it better to use a combination of examination methods?*

I suggest the use of *practical* and *written* examinations and have successfully employed these methods of examination to assess the student's understanding and competence of HVLA thrust techniques over a number of years. In my opinion, the ability of the student to pass *both* methods of assessment demonstrates that 'deep learning' has taken place.

Examination methods:

1. Written Examination

- a) Assessment of the student's ability to write techniques (refer to written paper Questions 1,2 and 3) and;
- b) The assessment of the student's ability to analyze, interpret and understand the written account of HVLA thrust techniques (refer to written paper Question 4).

2. Practical Examination The assessment of the student's ability to successfully perform HVLA techniques on a variety of patients.

Practical assessment also includes the assessment of the student's ability to **verbally** describe his or her own 'visual image' of the HVLA technique. To be able to paint, with words, a 'clear picture' of what is happening to a given joint. This skill is tested by the verbal explanations required in the practical examination and in Question 3 in the written paper.

How to prepare for written examinations

Establish the total marks allocated and the duration of the written exam. Then decide in advance the mark that will be allocated to each question. It is a good idea and it expedites marking if you have a model answer prepared.

Questions for a written paper may include:

1. Describe the **lock up procedures** used in *N, SLt, RRt, and FRS Rt lumbar roll techniques*. Explain the reasons why the lock up procedure is different in these two techniques.
2. Describe the **direction of thrust** used in *N, SLt, RRt, and FRS Rt lumbar roll techniques*. Explain the reasons why the direction of thrust is different in these two techniques.

These questions examine the student's ability to differentiate between two different techniques. The questions assess the students understanding of the rationale behind the positioning of the patient and the direction of the thrust.

→

3. Describe the movement that occurs to the inferior facets (left and right) of L3 and the superior facets (left and right) of L4 during the HVLA thrust to correct the lesion: L3/4 Neutral, sidebending right and rotating left, N, SRt, RLt.

This question examines how well the students understand their anatomy and biomechanics. It helps the instructor to know whether the student is developing the three dimensional visual image that experienced practitioners have in their 'minds eye' during any manipulation.

4. Write a technique 'incorrectly' and then ask the students to correct it. This method of written assessment examines the student's ability to interpret the written form of any technique. To successfully correct the incorrect technique the student must first know and understand the 'correct' technique and how and why all of the individual criteria are important to the technique overall.

The student is asked to correct the incorrect technique in the spaces provided. The correct answers are in *Italics*.

Supine Thoracic HVLA

Right facet closed ('closed' in the sagittal plane)

Lesion

T4/5 extended rotated and sidebent right, **ERS right**. The inferior facet on the right side of T4 has moved inferiorly, posteriorly and medially relative to the inferior left facet on T4 and the superior right facet on T5.

Restriction

T4/5 Extension, rotation and sidebending left.
Flexion

Patient position

Supine, arms crossed, hands clasping shoulders.

Operator position

Left hand on right shoulder i.e. thoracic spine sidebent left. At the side of the table, in this case the right. Level with patient's waist. Operator's right foot forward, right foot back, easy stance, knees slightly bent.

*Right hand on left shoulder
Operator's left foot forward*

Contacts

Place the knuckles and thenar eminence of your right hand on the Transverse process of T6. The spinous process (SP) lay in your palm. Operator's abdomen presses against pillow at patient's elbows. Support the patient's

head with left forearm, left hand on posterior and lateral aspect of the patient's left shoulder.

T5

Lock up description

Using patient's upper torso as a long lever. Sidebend and rotate right, then flex the patient down to **address the restriction barrier in the T4/5 joint**. Make sure you are localized by getting patient to push the elbows up into you, while you palpate the localized forces with your right hand. (Rotation can be introduced by moving the patient's elbows to the left of the midline). **Take the weight of the patient on your back foot as you lift/roll them. Your right hand acts as a fulcrum**

Sidebend and rotate left.

Thrust

Ask patient to breathe in and out. At the end of exhalation deliver a quick short sharp thrust in a posterior direction, at approximately 45 degrees i.e. into flexion, sidebending and rotating left. **Retest.**

Posterior and superior direction.

Explanation of technique

By sidebending and rotating left, then flexing the patient and adding a superior and posterior directed thrust, the thrust will open the relatively closed facet on the right of the T4/5 joint. The right inferior facet on T4 will move inferiorly, posteriorly and medially, relative to the left inferior facet on T4, and the superior facet of T5 on the right.

T4 inferior right facet will move superiorly, anteriorly and laterally.

5. Your patient has two lesions (a) L4/5 is ERS left and (b) L1/2 is FRS right.

a) What findings would indicate to you that a HVLA technique was an appropriate technique to correct such lesions?

b) What findings would indicate to you that a HVLA technique was an inappropriate technique to correct such lesions?

c) Write out in full the corrective techniques to correct both of these dysfunctions.

d) Explain the reasons why the direction of thrust is different in these two techniques.

e) Explain the reasons why the lock up procedures are different in these two techniques.

This question examines the students understanding of the appropriateness of performing a HVLA technique to any patient. This question also assess the students ability to write-up techniques as well as their ability to differen-

tiate the rationale for two different techniques as in Question 1 and 2.

How to prepare for practical examinations

Step One

a) Establish a teaching and assessment criteria

If the exam is to be considered a valid assessment of the curriculum then the teaching and the assessment practices must match. I propose that the criteria for teaching the techniques as described earlier, be followed by an examination method using the same criteria.

Using a format for assessment that the students are familiar with allows the assessor to give *precise* feedback to student, an essential ingredient for *quality* teaching and learning.

More information about the criteria of the examinations is detailed under the heading 'General Assessment Criteria'.

b) What grade is a pass?

It is important, where practicable, to have more than one examiner and that the examiners have a preliminary meeting to discuss what they consider is a 'satisfactory' or 'unsatisfactory' performance relative to the examinees experience. Different criteria may be used when examining a novice than a senior, clinically experienced student.

In my experience, a high standard of proficiency in HVLA technique skills has been demonstrated in examinations when students have been made aware of the examiners' high expectations. The higher the expectation, the more effort will go into meeting that standard.

Students can either successfully perform a technique or they cannot. If they cannot, then they should receive precise feedback on how they can improve. Practitioners cannot 'half' manipulate the spine, as a Dentist cannot 'half' pull out a tooth. Therefore, it is recommended that the pass mark for any technique should be 90 percent i.e. students need to achieve a 11.7 out of a possible 13 marks per technique, in the practical-examination marking form proposed.

c) How often is it necessary to conduct exams?

If the examinations are to be considered valid and reliable then the educators must ensure that *all* techniques taught in the curriculum are examined.

It is a good idea to conduct practical exams regularly, say after six or eight techniques have been taught.

It is the lecturer's responsibility to closely monitor student progress, ensuring patient safety at all times.

When exams are conducted on a *regular* basis, the edu-

cator is provided with the perfect opportunity to give *regular feedback*, thus ensuring quality teaching and learning.

Included at the end of this text is an example of how to record individual student progress which provides a 'check list', ensuring that *every* student successfully performs *every* technique taught in the curriculum at least once.

d) How many techniques should be examined each time?

As a general rule, it is a good idea to examine students on only four techniques at each exam. This takes approximately fifteen minutes face to face.

At the beginning of an exam, students will be given a 'selection' of four techniques written on paper and then be allowed five minutes reading time before being asked to demonstrate their proficiency. The lecturer can prepare six or eight 'selections' of different questions, refer to Table 1, so that the same questions are not repeated too often. A large selection is particularly important for larger classes and examinations where students are treating other students. It is also important that students be instructed to leave the building immediately after their exam so as not to invalidate the examination process.

Table 1 shows how two different students can be examined on five different somatic dysfunctions without giving the same questions to both students.

Table 1.

Selection One	Selection Two
1. C3/4 ERS right	1. C6/7 ERS right
2. AA Rotated right	2. OA Anterior on left
3. OA Posterior left	3. OA Posterior right
4. C5/6 FRS left	4. C2/3 FRS right

Step two

Inform students of exam procedures

Early in the semester advise the students on the examination criteria, the number of techniques, and the other examination procedures. Students cannot be expected to perform well if they have not been properly informed on what to expect. A great deal of anxiety between examiners and students can be eliminated if good communication channels are maintained. Stressed students make poor examinees. Poor communication often results in more students needing to re-sit exams, thereby increasing the examiner workload.

Step three

Scheduling the exam



a) Establish resources

Check availability of examiners and rooms in which to conduct the exams.

b) Organize an exam timetable

Decide how many techniques each student will be assessed. Calculate how long each exam will take and work out a class roster allowing some 'fudge' time. Decide if students will be performing the techniques on each other or if they need to bring a suitable patient.

Step four

Examiner preparation

a) Who will examine the students?

Examiners should be chosen who have previous experience examining HVLA thrust techniques or, who have attained a high degree of personal skill and a depth of knowledge of HVLA thrust techniques from their clinical experience.

All examiners need to be familiar with the examination criteria before commencing to examine the students.

b) Outline examiner duties and responsibilities

It is necessary to discuss how much prompting of students is to be allowed. Many poor students pass because a kind examiner has prompted them along. Many a good student has had a blank moment where a little prompting would have revealed a performance worthy of praise. How much prompting is acceptable to each examiner?

In my experience, if the students are properly prepared for the examination and adequately informed of the examination criteria, very little prompting is needed.

c) What is a 'successful' performance of a HVLA technique?

A good guide when examining students is to ask, 'can the student apply this technique to this particular patient effectively?' Consideration must be given to all the possible variables brought to the examination by both the student and the patient. Variables such as patient vs student practitioner body size, patient mobility, age, and the height of the treatment couch.

Examiners and students must remember that the technique is not being applied to 'the textbook', it is being applied to 'the patient'.

Technique assessment should be based on the agreed criteria, yet must be flexible enough to accommodate for all the variables.

The mere presence of an audible 'pop' is not sufficient evidence of a successfully executed manipulation.

d) Decide on feedback.

Fundamentally important to the educator's role is to

provide the student with *accurate and constructive feedback*. Clear, concise, and positive feedback by examiners creates an atmosphere within which students feel safe to be 'wrong', to ask when they are unsure, to expose their lack of knowledge, and to open themselves to deeper understanding. With unclear or negative feedback students' learning may be inhibited or completely stifled.

Examiners must agree upon whether or not the student is to receive immediate feedback after the performance of each technique, at the end of exam, or at a later date after all the exams are over. More time will need to be allocated for examining each student if the examiner intends to give immediate feedback.

Regardless of when it is given, it is important that all feedback is in a written form. Students quite often wish to reflect on the comments at a later date and, if they are not written down, it will be difficult for the examiner to remember all of the details.

It is also important for evidence of quality teaching, that feedback is written down to add to the never-ending paper trail of necessary information regarding a student's development throughout the course.

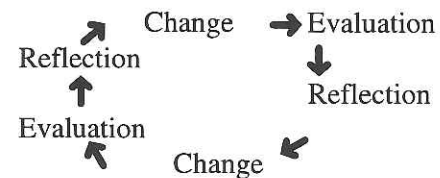
Step five

Evaluate the exams

Finally, after the exams are over and the results are posted, take time to evaluate if all students were consistently good at certain aspects of the techniques examined, or whether there are obvious areas that need to be taught differently. *Are there other ways of relaying information? What do the other examiners think of the exam process? Can the examiners offer any suggestions for improvement? What do the students think of the exam process? What constructive comments can students provide? What in the student's opinion can be taught differently? How?*

Only by employing the continuing **reflection cycle**, Figure 1, can teachers teach effectively.

Figure 1



Be open with yourself and your students about teaching and assessment practices, it is the *only* avenue towards quality teaching and learning.

General Assessment Criteria Practical Examination of HVLA techniques.

Total marks per technique = 13

Diagnosis - One mark

In order to gain full marks in this section the student should:

- a) give a verbal description of the **lesion position and movement restriction** of the joint described in the question, or,
- b) explain the somatic dysfunction found in the patient on the bench.

Operator and Patient Positions

Two marks (one mark each)

The examiner must assess the student's ability to position themselves and the patient correctly to successfully administer each technique. Consideration should be given to all possible variables for example, where the patient is much larger than the practitioner and vice versa, or the bench is height adjustable or not.

Student must demonstrate an awareness of maintaining their own good posture and personal safety as well as the ability to recognize if it is appropriate for the patient to be maneuvered into the required position.

Patient modesty and safety is paramount.

Contact - Two marks

Equal consideration must be given to the involvement of *both* of the operator's hands in the performance of each technique.

Lock Up description and Lock Up performance - Two marks (one mark each)

In order to gain full marks in this section the student should be able to give a verbal description of how the patient is being positioned, and the effects of those movements on the patient's somatic dysfunction. Making sure all components of the restrictive barriers are addressed. The patient should be positioned, as described, and as required for successful application of the technique.

The student needs to *verbalize* the correct lock up description, as well as *perform* the correct lock up, to get two full mark in this section.

Localization - One mark

At least one *examiner will palpate as closely as possible* to the joint to make sure that all forces are localized to the required area. A 'pop' is neither evidence of local-

ization or successful delivery of a technique.

Thrust - Three mark

Thrust 'performance' is assessed specifically, as it is distinctly different from the student's ability to 'say' in which direction the thrust should or will be delivered.

The student's ability to perform the thrust in the direction as stated is graded because often, with novices, the description and the performance of the actual thrust are at odds with each other.

Thrust speed: The criterion of speed is that it is *high velocity* on delivery.

Thrust force: Specific notice should be taken if appropriate force has been used in the execution of the thrust.

The examiners must decide if excessive force has been used which could possibly cause trauma to the patient, or if insufficient force has been applied, rendering the technique ineffective, remembering that the requirement for success is a *low in amplitude* force.

Explanation of the Technique - Two marks

To gain marks in this section the student must demonstrate that they have a thorough understanding of the aims and objectives of the technique. Also, that they have a three dimensional appreciation of how the technique works, which incorporates a sound knowledge of the relevant anatomy, physiology and biomechanics.

Bibliography

1. Bevis EO, and J. Watson, 1989, Accessing Learning; Determining Worth or Developing Excellence - From a Behaviourist toward an Interpretive-Criticism Model Toward a Caring Curriculum: New Pedagogy for Nursing, 9, pp 261-303
2. Cox KR, How to assess performance, The Medical Teacher, Second Edition, Churchill Livingstone
3. Cox KR, 1988, What is included in clinical competence? The Medical Journal of Australia, Vol 148, pp 25-27
4. Cox KR, 1990, No Oscar for OSCA, Medical Education, 24 pp 540-545
5. Cox KR, 1992, What doctors need to know: A note on professional performance. The Medical Journal of Australia, Vol 157, pp 764-768, December 7/21
6. McGaghie W, 1991, Professional Competence Evaluation, Educational Researcher, pp 3-9, January-February
7. Murphy CS, 1987, Clinical Audit: Measuring the Quality of Individual Clinical Performances, British Journal of Occupational Therapy, 50(3), pp 83-85
8. Pavish, CA, 1987, Model for Clinical Performance Evaluation, Briefs, Vol. 26, No. 8

Personal correspondence from:

- D. Jones, 1996, College of Osteopathic Medicine of the Pacific
D. Tatton, 1996, British School of Osteopathy □

HVLA Practical Examination Marking Form

Date

Student's Name

Examiner's Name.....

Selection No.....

Students must score 11.7/13 ie. 90% to pass a particular technique, as well as pass 3 out of 4 techniques to pass the exam overall.

	Marks	Tech.1	Tech.2	Tech.3	Tech.4
Diagnosis	1				
Operator Position	1				
Patient Position	1				
Left Contact	1				
Right Contact	1				
Lock Up Description	1				
Lock Up Performance	1				
Localization	1				
Thrust Speed	1				
Thrust Force	1				
Thrust Direction (performance)	1				
Explanation of Technique	2				
Total	13	/13	/13	/13	/13

Comments:

HVLA

CORE TECHNIQUE EXAMINATIONS SUMMARY

STUDENT NAME.....

Technique	Date	Mark	Date	Mark	Date	Mark	Date	Mark
Supine Thoracic								

The management of low back pain: Short leg syndrome/postural balance

by Kenneth E. Nelson, DO, FAAO, Chicago, IL

Illustrations by Ken Nelson, DO, FAAO

Introduction

Low back pain may be the result of organic pathology or it may be purely a manifestation of somatic dysfunction. If it is due to organic pathology, the pathologic process must be diagnosed and definitively treated. Similarly, if it is purely due to somatic dysfunction, the dysfunctional mechanics must be diagnosed and definitively treated. The patient with organic pathology will most certainly have concomitant somatic dysfunction and will most always respond better to treatment if the somatic dysfunction is also treated. The somatic dysfunction in either case may be secondary to postural imbalance, from skeletal asymmetry and/or asymmetric muscle pull. Such problems of postural balance contribute significantly to the dysfunctional component of low back pain. These mechanics must be understood to be treated.

Inequity of leg length is extremely common. Of 105 members of the 1968, 1969, 1970, and 1971 classes of Chicago College of Osteopathic Medicine (CCOM) who had postural x-rays done, 58, or 55 percent had an inequity of leg length of one quarter inch or greater. The diagnosis of "short leg syndrome" is based upon a constellation of musculoskeletal and general body symptoms, and physical findings which may be confirmed by x-ray. The following paper is intended as a logical approach to the diagnoses and treatment of postural imbalance.

The presentation of the patient

The typical patient is middle aged or older. They present with a chief complaint of midline lumbosacral pain which is most often described as dull or aching in nature. Frequently, the pain will radiate to one buttock (usually on the side of the short leg). The patient may also complain of a myriad of other pelvic complaints and myalgias essentially anywhere in the muscular skeletal system. Sometimes they will complain of a generalized feeling of fatigue (bringing such things as anemia and hypothyroidism into your differential diagnosis). Often, when questioned, the patient will inform you that they awake in the morning with little or no discomfort, but as the day

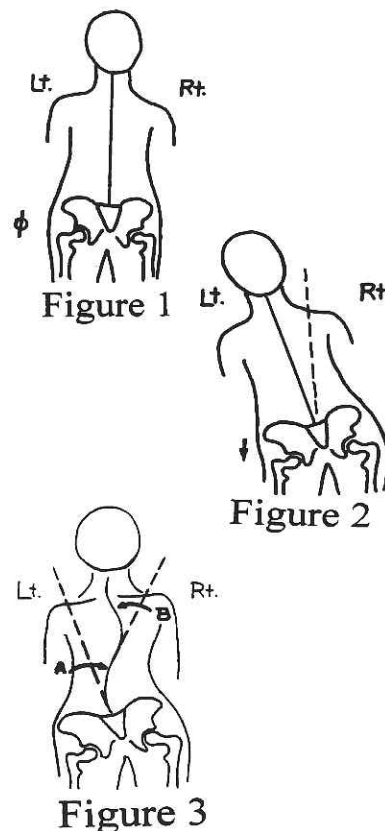
progresses they become more and more symptomatic. Sometimes, they will note that their symptoms develop at the same time everyday.

The typical presentation is the result of muscle spasm. The mechanical stresses of asymmetric weight bearing typically produce lumbosacral pain. A patient with primary inequity of leg length may present acutely with secondary muscle spasm splinting the painful lumbosacral junction. Such myospasticity increases during periods of immobility. Consequently in the acute presentation the patient may describe pain in the morning when first attempting weight bearing. This complication will be considered in the discussion of pelvic sideshift.

An explanation of the chief complaint

If an individual has equal leg length, and there is no

primary sacro-pelvic dysfunction, their pelvis and, therefore, their sacral base should be level. With a level pelvis, the spine above should be straight. (Figure 1) If one leg is short, the straight spine will be tipped to the side of the short leg. (Figure 2) This, obviously, does not occur. Rather, in an attempt to maintain one's center of gravity over the pelvis, a compensatory (Type 1) curve develops. (Figure 3) A single curve (A) can develop or additional compensatory curves (B) may occur. The individual in



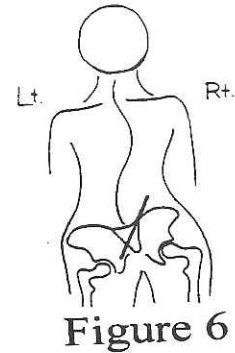
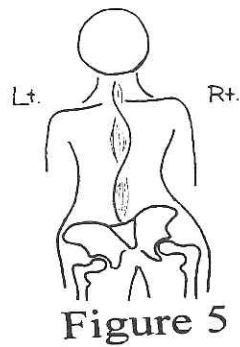
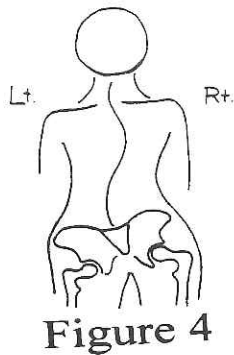


Figure 4 has a short left leg, with a compensatory lumbar curve (convex left) and additional thoracic and cervical compensatory curves. These curves are not just balanced above the pelvis, they are the result of and are maintained by, asymmetrical paravertebral muscle contraction. (Figure 5)

Under certain circumstances the sacrum shifts in such a way that it will rotate upon either the left or right oblique axis. Weight bearing on one leg will cause the homolateral oblique axis to be engaged with resultant sacral rotation. Side bending of the lumbar spine also engages the oblique sacral axis on the side toward which the lumbar spine is side bent. In Figure 6 it is easy to see how, as the result of the short left leg, the compensatory lumbar curve will cause the right oblique axis to be engaged. Additionally, because of the inequity of leg length the individual walks and bears weight asymmetrically. As the patient walks they must 'step up' during stance phase upon the long leg, and 'step down' during stance phase on the short leg side. This asymmetric work load tends to chronically engage the sacral oblique axis on the long leg side. Since standing and walking tends to occur under neutral circumstances, if, as in our example (Figure 6), the right oblique axis is chronically engaged, the sacrum will therefore be chronically rotated right on the right oblique axis. Lumbosacral mechanics under this circumstance will be a "right on right forward torsion." The sacrum is the lowest segment in the compensatory lumbar curve. The curve (Type I mechanics), as a group, is side bent right and rotated left. The fifth lumbar vertebra, being located below the apex, is side bent right and rotated left relative to the sacrum. Therefore, the left side of the sacral base is relatively anterior to the left transverse process of L5. This is a right on right forward torsion.

Sacroiliac mechanics are equally logical. If the sacrum is chronically rotated right on the right oblique axis (as in our example above) this results in mechanics that favor either an anterior sacrum on the left or a posterior sacrum on the right.

A posterior sacrum is associated with homolateral piriforms spasm. As the sacrum rotates posteriorly, its ventral surface moves away from the greater trochanter

placing the homolateral piriformis muscle on tension. This initiates a stretch reflex that results in piriformis spasm.

An anterior sacrum is associated with homolateral gluteus medius spasm. The relationship between an anterior sacrum and gluteus medius tension is similar but not as immediately obvious. The anterior sacrum is anterior to the homolateral ilium. There is restriction of posterior movement of the sacrum relative to the ilium on the dysfunctional side. Under normal weight bearing circumstances, forces acting upon the anterior sacrum from above, through the lumbar spine, tend to pull it posteriorly (toward a neutral position). Because of the SI restriction, the ilium is also pulled posterior relative to the femur. This places tension upon the gluteus medius (and minimus) which originates off the external surface of the ilium between the iliac crest and the posterior gluteal line above and anterior gluteal line below and inserts upon the lateral aspect of the greater trochanter. The increased tension on the muscle results in spasm.

Dysfunctional sacro-pelvic mechanics cause the three bones of the pelvis to "twist" in such a way that asymmetric stresses are placed upon the pelvic floor resulting in symptoms resembling proctitis, prostatitis, cystitis and a myriad of gynecologic problems. The allopathic diagnoses "levator ani syndrome" and "proctalgia fugax" are most likely manifestations of sacro-pelvic dysfunction. Musculoskeletal complaints above the pelvis result from asymmetric muscle contraction associated with Type I mechanics and the fact that soft tissues on the side of the convexity of a Type I curve are constantly being stretched.

Type II mechanics are frequently found at transitional points within the patients Type I pattern. Type I curves are associated with increase in the A-P (lordotic, kyphotic) curves. Intersegmental rotational mechanics change at the apex of a Type I curve. As such Type II (flexion mechanics) might be expected at the level of the spinal segment immediately above the apex of a Type I thoracic curve, and Type II (extension mechanics) at the level of the segment immediately above the apex of a Type I lumbar curve. At the cross-over point between two Type I curves the A-P curve is flattened making these areas more vulnerable

to Type II extension dysfunctions in the thoracic region and Type II flexion dysfunction in the lumbar region. Spinal facilitation at these levels can effect the patient in many ways through somato-visceral and somato-somatic reflexes.

Rib complaints may be produced by the side bending and rotational mechanics of a Type I thoracic curve. Frequently a patient will experience discomfort merely because of the crowding of the ribs on the concave side of a thoracic group curve, or the approximation of the lower ribs and iliac crest on the concave side of a lumbar curve. Costotransverse dysfunctions are often found in association with Type II vertebral dysfunctions.

In Figures 5 and 6 above you can see how the compensatory pattern can extend up into the cervico-thoracic and even the high cervical region. This can produce shoulder pain, cervical pain, tension cephalgia, and even TMJ dysfunction.

Increased neurologic activity eventually reduces neural adenosine triphosphate to inosine monophosphate causing the neuron to shut down. As motor neurons shut down, the muscle fibers they innervate stop contracting, thereby placing greater work load upon the muscle fibers that remain active. This increased work load progressively causes pain. The pain is most probably the result of minor, reversible, membrane damage initiating the cascade of inflammatory response.

With the above information in mind let's reconsider the "typical" presentation of the patient. The chief complaint is midline lumbosacral pain which is the result of the lumbo sacral mechanics. The pain is dull and aching myalgia, which is absent or not as severe early in the morning when the patient awakes refreshed after a nights sleep (unless secondary myospastic splinting of the lumbosacral junction overrides the presentation). As the day progresses and the patient fatigues, biochemical changes in the stressed areas produce pain. The asymmetric mechanics of the compensatory curves and sacroiliac dysfunction determine the pain pattern. Since younger individuals have high physical reserve they have tolerance for the stresses of asymmetric postural mechanics. As they age, their tolerance decreases until eventually they become symptomatic. Typically this does not occur until after the middle of the fourth decade of life (>age 35). It should be noted that if you see a young patient with what appears to be short leg syndrome you should look for complicating factors. If the patient is younger than 20 you should search diligently for significant local pathology (spinal anomalies, discitis, osteomyelitis) or distant pathology with viscerosomatic reflex. Individuals younger than 20 essentially "never" present with short leg syndrome.

The physical examination

First let us consider leg length. You must differentiate between functional (i.e. appears to be) and anatomic (i.e. actually is) inequity of leg length. You may have seen evaluation of leg length with the patient supine by comparison of the relative positions of the medial malleoli. This procedure, by itself, does not adequately differentiate between functional and anatomic leg length discrepancies. Causes of functional leg length discrepancy include:

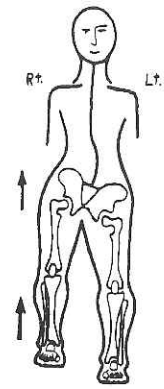
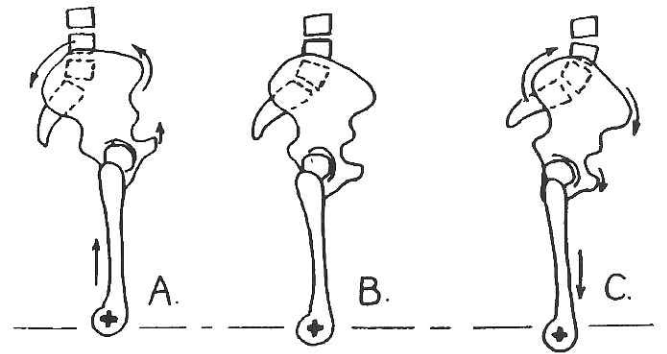


Figure 7

Lumbar curve (Figure 7). With the patient lying down



the presence of lumbar group curve (Type 1) mechanics will tend to pull the hemipelvis on the side of the concavity of the curve in a cephalad direction. This will in turn pull the lower extremity cephalad creating the appearance of (i.e. functional) leg length inequity.

Anterior or posterior displacement of the ilium (Figure 8). Anterior/posterior ilial dysfunction's are said to occur as rotation of the ilium about the hypothetical inferior transverse sacral axis as proposed by Fred Mitchell, Sr. Because the hip joint is anterior to the sacroiliac joint, posterior rotation of the ilium draws the hip joint cephalad (Figure 8a). With the patient lying down this creates a homolateral functional short leg. Conversely anterior rotation of the ilium causes the hip joint to move in a caudal direction (Figure 8c). This, with the patient supine, produces a homolateral functional long leg.

Some clinicians attempt to measure leg length, employing a tape measure, by determining the distance between the most inferior aspect of the anterior superior iliac spine and the most distal point on the homolateral medial mal-



leolus. This is done with the patient supine, and although it may suffice for determining "orthopedic" (measured in inches) anatomic inequities of leg length, the inequities dealt with when treating anatomic short leg mechanics are measured in increments of one eighth inch (or in millimeters). The act of placing the tape measure upon the anterior superior iliac spine (ASIS) or malleolus has an inherent error potential of at least plus or minus one-eighth inch. Consider also the effect of pelvic dysfunction upon the position of the ASIS. Above we discussed how a posterior ilium will produce a functional short leg (Figure 8a). However, as the ilium rotates posteriorly it causes the ASIS to be displaced superiorly. This increases the distance between the ASIS and the medial malleolus, causing the functional short leg to measure long. The converse would be true in the presence of an anterior-iliac (Figure 8c). These considerations obviously invalidate the use of a tape measure for the osteopathic assessment of leg length.

Anatomic leg length discrepancy is the result of actual inequity of the long bones of the legs. It is best assessed with the patient standing, knees fully extended and bearing weight on both legs equally. This uses the floor as a fixed reference point. Observation of a constellation of anatomic landmarks is performed comparing them bilaterally.

These landmarks include:

1. Posterior superior iliac spines (PSIS), the landmark many clinicians feel is the best indicator of sacral base plane.
2. Sacral dimples.
3. Most lateral aspect of the iliac crests.
4. Tops of the greater trochanters, the most direct indicator of leg length. However, they are often obscured by overlying soft tissue, and fail to account for inequities of femoral neck angles.

Typically all of the above landmarks are low on the side of the short leg.

The standing structural exam may be completed by checking for:

1. Pelvic side shift (discussed below).
2. Lateral curves, by having the patient forward bend and observing for asymmetrical paravertebral prominence, the result of the rotational component of Type I mechanics.
3. Symmetry of anatomic landmarks above the pelvis (i.e. scapulae, acromion processes, and mastoid processes).
4. Symmetry of anatomic landmarks of the lower extremity (i.e. popliteal creases and medial malleoli).

This complete constellation of observations should give an idea of the patient's neutral weight bearing pattern. If this information is added to that obtained from the supine examination, discussed above, you can draw conclusions as to the presence, and clinical significance of anatomic

vs. functional leg length mechanics.

Let us now consider pelvic side shift (PSS). Pelvic side shift is defined as the lateral deviation of the pelvis to the right or left of the midline when the patient is standing. It is tested for while stabilizing the upper torso by holding the shoulder with one hand and pushing medially over the lateral aspect of the opposite hemipelvis with the other

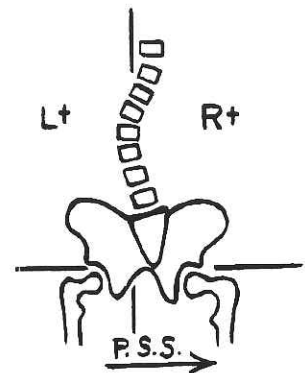


Figure 9

The test is positive when the pelvis moves freely in one direction and resists movement in the opposite direction. A positive pelvic side shift is designated as either left or right as an indication of the direction of unrestricted pelvic motion. Figure 9 illustrates a positive pelvic side shift right.

Since pelvic side shift moves the center of the pelvis away from the midline, and a person will attempt to maintain their center of gravity in the midline, the torso above the pelvis will move in the direction opposite the side shift. Under neutral circumstances this will result in a compensatory lumbar curve (Type I mechanics) convex on the side opposite the side shift. In Figure 9 the right pelvic side shift is associated with a thoracolumbar curve, convex left. The lumbar side bending is to the right (the side of the group concavity), which will engage the sacral right oblique axis. Since neutral conditions exist a right on right foreword torsion (lumbosacral) results. Because the sacrum is rotated right on the right oblique axis if sacro-

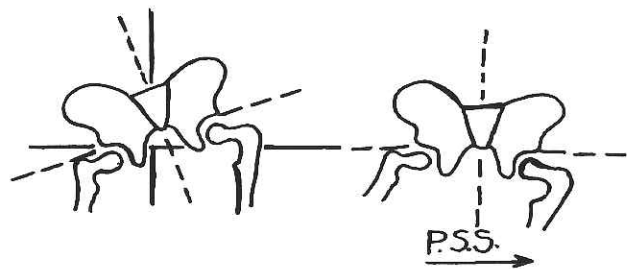


Figure 10

iliac dysfunction is present, you would expect to find an anterior sacrum on the left, or a posterior sacrum on the right in association with a pelvic side shift to the right.

Pelvic side shift may be the result of conditions affecting the pelvis from below. Inequity of leg length is associated with pelvic side shift toward the long leg side. The pelvis functions symmetrically most readily when the sacral base is level. Shifting the pelvis toward the long leg side tends to level the sacral base. (Figure 10)

Pelvic side shift may be the result of conditions affect-

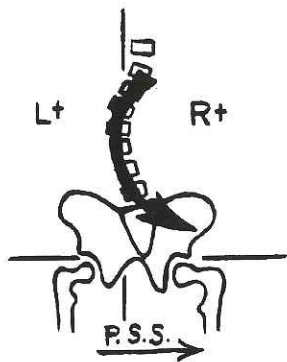


Figure 11

ing the pelvis from above. Group curve mechanics (Type I mechanics) will produce a pelvic side shift. Idiopathic scoliosis commonly presents as a primary fixed thoracic curve which is convex right. There is often a smaller lumbar compensatory curve, convex left. This latter curve will cause the pelvis to shift toward the right (Figure 11).

The contribution of Type I lumbar mechanics to the pro-

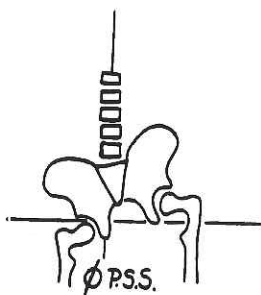


Figure 12

duction of a pelvic side shift can be readily seen when a patient presents with a short leg and the entire compensation occurs between L5 and S1 (Figure 12). Because the spine is straight, the center of gravity is situated centrally over the pelvis, and no pelvic side shift results. The unequal leg length will allow the pelvis to tend to shift toward the long leg side but the side shift will not be maintained during normal weight bearing activity.

Muscle pull mechanics can also effect the pelvis from

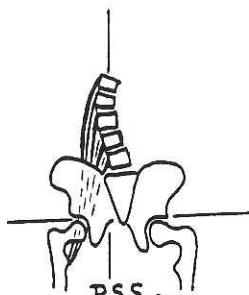


Figure 13

above producing a pelvic side shift. This commonly occurs in the presence of asymmetric spasm of psoas major. Spasm of the left psoas major will produce a pelvic side shift to the right in an otherwise level pelvis (Figure 13). Psoas spasm may overcome the compensatory spinal curve from a short leg, thereby eliminating pelvic side shift (Fig-

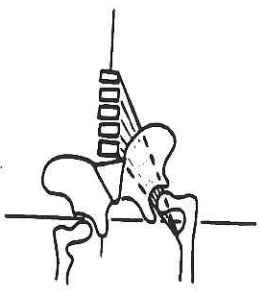


Figure 14a

ure 14a), or psoas spasm may compound short leg mechanics. (Figure 14b) Before short leg mechanics can be effectively diagnosed or treated, dysfunctional muscle pull mechanics must be eliminated.

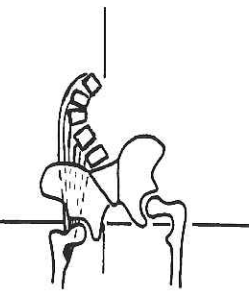


Figure 14b

Assessment

The diagnosis of "short leg syndrome" is based upon the pain complaint (pattern, quality, and incidence) and the findings of the musculoskeletal examination.

The pain complaint associated with "short leg syndrome" was described above. However, it is worth while to reiterate that short leg syndrome is the result of weight bearing upon essentially "normal" (since the majority of individuals have leg length inequity) anatomy. The patient tends to awaken in the morning pain free or at least with decreased symptoms.

The pain complaint increases as the day progresses. Complaints associated with anatomic pathology (herniated nucleus pulposus, spondylolisthesis) are effected similarly by rest and weight bearing, however, they tend to become intensely symptomatic after brief periods of weight bearing.

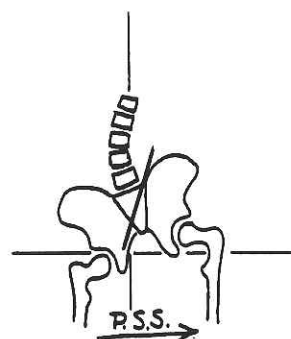


Figure 15

Muscle-pull mechanics produce pain patterns similar to short leg mechanics. The incidence of the pain differs. Low back pain resulting from psoas spasm is worse after periods of immobility because the offending muscles become set abnormally short when they are resting. As such the patient experiences significant discomfort initially in the morning when they attempt ambulation. As the patient moves around and their muscles "warm up" their symptoms decrease.

The musculoskeletal findings typically associated with short leg syndrome are as follows (Example short left leg Figure 15):

1. Anatomic landmarks (PSIS, iliac crest, greater trochanter) low on short leg side (Example: on left)
2. Pelvic side shift toward long leg side (Example: toward the right)
3. Pelvic rotation toward the long leg side due to forward torsion (Example: right on right forward torsion, pelvic rotation right)
4. Anterior sacrum on short leg side (Example: on left)
5. Compensatory spinal curve convex on short leg side (Example: convex left)

Plan (for additional diagnosis)

The findings on physical examination may be confirmed by obtaining postural x-rays. The postural series is the "gold standard" for determining weight-bearing mechanics. It was developed by Earl Hoskins, DO, and Walford Schwab, DO, in the 1920s. The series consists of three films taken with the patient standing.

They are:

1. A-P pelvis and lumbar spine
2. Lateral pelvis
3. A-P thoracic spine

When properly performed, measurements obtained from the postural series are accurate to within one eighth of an inch. Measurements typically obtained from the A-P pelvis film include (Figure 16):

1. Femoral head height discrepancy
2. Sacral base unleveling
3. "Pelvic side shift" (static deviation of the pelvis from the weight bearing midline, also called the "midheal line")
4. Iliac crest height discrepancy (occasionally measured)

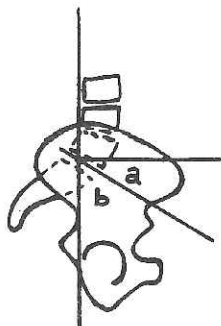


Figure 17

Up to this point we have considered postural balance in terms of left/right bilateral mechanics. The standing lateral pelvic x-ray gives important data about anterior/posterior balance mechanics. The angle of inclination of the sacral base measured against a horizontal line is Ferguson's lumbosacral angle. (Figure 17, angle A) Hoskins and Schwab originally measured the angle of inclination of the sacral base against a vertical line. (Figure 17, angle B) The normal range of Ferguson's angle is approximately 30 to 45 degrees (Hoskins/Schwab angle 45 to 60 de-

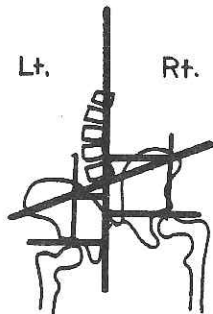


Figure 16

The A-P thoracic film gives information regarding the Type I spinal compensatory pattern. The lateral pelvic film offers information which cannot be obtained readily by physical examination.



Figure 18

grees). As Ferguson's angle increases above 45 degrees (or, its complement, the Hoskins/Schwab angle drops below 45 degrees), the amount of vertical strain placed upon the sacral base by L5 and the torso above is increased to a point where lumbo sacral strain can develop.

Another method of evaluating for lumbo sacral strain and instability is to drop a vertical line from the center of the body of L3 (Figure 18). This line should pass through the anterior two thirds of the sacral base. If it passes anterior to the sacral promontory, lumbosacral instability is probable.

If a line is drawn diagonally from the sacral promontory (Figure 19, point A) to the most superior/posterior point on the pubis (point B), a rectangle can be constructed from the horizontal and vertical components of this diagonal. This rectangle may then be employed to calculate the pelvic index as follows:

$$\frac{\text{Length of Horizontal}}{\text{Length of Vertical}} = \text{Pelvic Index}$$

Pelvic indices greater than one are associated with lumbosacral instability. The Levator is an orthotic device which is custom built and is used to reduce the pelvic index to acceptable range.

Plan (for treatment)

Having made your diagnosis, it is now time for you to formulate a treatment plan. Your objective is to functionally balance ("level") your patients sacral base, eliminating the propensity for chronic engagement of either the right or left oblique axis. This may be done employing lift therapy. A heel pad, typically no larger than one quarter inch, is placed in the patient's shoe on the side of the short leg and then adjusted upward (or downward) in increments of one eighth inch about every two weeks. As long as the anterior sacrum persists on the short leg side you can add to the heel pad. If sacral mechanics "flip over" so the sacrum becomes anterior on the side opposite the anatomic short leg you have created an artificial long leg and should reduce the size of the heel pad. Lifts larger than three eighths of an inch usually will be too thick to fit comfortably into the patient's shoe and should be added to the heel of the shoe exteriorly. Lifts greater than one half inch may require building up the sole of the shoe, as well as the heel. For older patients, you can obtain a rough estimate as to how much lift will ultimately be required by dividing the measured inequity of leg length in half. The size of the initial lift and the rate by which you add



Figure 19

height is determined by the flexibility of the patient. You can evaluate this by having the patient place the heel of their short leg upon pads of various thickness and observing the effect this has upon the pelvic side shift and the compensatory lumbar Type I curve. The adult postural pattern is usually established by the middle of the second decade of life. The longer the leg length inequity has been present, the more fixed the patients accommodation is likely to be, and consequently the more slowly you should progress with the lift therapy. When treating leg length inequity of recent onset (i.e. fracture or hip surgery) it is appropriate to attempt to correct the difference immediately.

Placing a heel pad in a patient's shoe necessitates that the individual shift their pattern of accommodation accordingly. This shift in accommodation may be facilitated by specifically treating all existent somatic dysfunction before initiating lift therapy or when making changes in the size of the lift.

Adjunctively, exercise should also be employed. Active stretching exercise will increase the patients overall

range of motion. Passive ("lazy person") exercises may be used to specifically stretch the concave side of Type I accommodative spinal curves. In general, it is always a good principle to stabilize as well as mobilize. Most of these patients have some degree of lumbosacral instability, and actively strengthening the paravertebral and abdominal muscles is always a good idea. Strengthening the abdominal musculature will tend to decrease Ferguson's angle and the pelvic index. The Levitor may also be used for this purpose. It requires special training to construct and deploy the Levitor. This is beyond the scope of this presentation. Levitor courses are available.

[Note from the author: *In this paper I have attempted to give you the logic I use for patients with postural balance problems. The discussion was essentially limited to the typical pattern of accommodation to leg length inequity. Patients may present with variations in the accommodative pattern and, although the initiation of lift therapy may occasionally be trial and error, the principles outlined above still apply.*]□

continued from page 9

secondary structural factors. In his technique instructions he constantly emphasized the necessity of aligning the whole spine from coccyx to occiput. He believed that all techniques should be applied with definite objectives in mind and warned against the futility of purposeless manipulations which he considered as mere "engine wiping."

In addition to the specific correction of spinal osteopathic lesions, manipulative technique is used to accomplish various therapeutic purposes. Physiological processes may be stimulated, defensive reactions may be encouraged, and symptoms may be controlled.

Stimulation of physiological processes

The physiological processes which serve the body economy represent the expenditure of energy through specialized structures. This energy is ultimately derived from the oxidation of food ingested. Energy is released to muscles for somatic and visceral activity. Energy transmitted to glandular structures results in the elaboration of chemical substances which control growth and viscera functions. The distribution of this energy is vested in specialized cells and their processes found in the nervous system. Normal function, therefore, depends upon the conversion of potential into kinetic energy and the transmission of impulses so produced to cells which are activated.

Disturbed function may result from lack of raw materials for oxidation, i.e., malnutrition; improper oxidation by the tissues, i.e., disturbed glandular function; inadequate transportation by the blood stream, i.e., anemia and congestion; inability of the nerve cells to function as discharging centers, i.e., central paralysis; interference with the proper conduction of nerve impulses, i.e., peripheral paralysis and disturbed reflexes.

Osteopathic structural therapy is concerned with improper conduction of nerve impulses as a contributing factor in the causation of symptoms because the conduction pathways of the peripheral and autonomic systems are most liable to be disturbed by environmental influences. Disturbances in autonomic innervation may have adverse effects upon vital functions of circulation, respiration, digestion, and elimination. Such disturbances are frequently the result of spinal structural lesions and their specific correction is a primary objective in the treatment of diseases which are accompanied by disturbances of these functions. Clinical experience has shown that great benefit may be derived from nonspecific osteopathic therapy directed to the paravertebral structures and that disturbed autonomic balance may be restored by such technique. In cases where surgical structural therapy may be an essential part of treatment pre- and postoperative osteopathic treatment can be of great benefit.□

AAO's Bookstore adds (3) Books



Osteopathic Principles in Practice, Revised Second Edition

by William A. Kuchera, DO, FAAO and Michael A. Kuchera, DO, FAAO

"Learning to be an osteopathic physician is a cooperative venture between the student and the faculty. There is no way that the faculty, through lecture and demonstration, can give the student all the information that will be needed as a physician. The student must have or develop a driving desire to learn, to know, to read about and to practice the basic osteopathic philosophy, principles, techniques, and procedures presented during the training years. This text is designed and presented with the expectation that each student will graduate as a sensitive, well-trained physician who puts their osteopathic principles into practice

** providing the latest indicated text, pharmaceutical and surgical aids,*

** recognizing the fact that even though illness today may be caused by stress, disease, and accident, clues to dysfunction in the body will be found in the neuromusculoskeletal system;*

** designing treatment to maximize structure-function relationships and homeostatic responses with the body unit."*

Easy OMT:

An easy to use, step-by-step photo reference guide to manual medical care

by William H. Howard, DO

Retired Kirksville College of Osteopathic Medicine Professor William L. Kuchera, DO, FAAO writes in the foreword:

"Easy OMT presents the basic HVLA, muscle energy, and indirect osteopathic manipulative techniques following the outline of the *Kimberly Manual of Manipulation* as taught in the osteopathic medical colleges in the United States.

"The presentations are concise and clear. The professional photos orchestrated by Dr. Howard clearly illustrate the position of the patient, the position of the physician and intent of the technique. . .

"It is my recommendation that this new edition be in the reference library of every osteopathic medical student and physician."

Osteopathic Considerations in Systemic Dysfunction

by M. L. Kuchera, DO, FAAO and W. A. Kuchera, DO, FAAO

This text encourages the reader to examine familiar medical facts, anatomic relationships and physiologic functions from the osteopathic perspective. This perspective can then be carried into the diagnostic and therapeutic decisions which will repeatedly be required of the medical student and the osteopathic physician for the rest of their professional lives.

This text does not propose to replace the many reference texts of medicine and does not include a complete differential diagnosis or a complete treatment plan for the clinical situations that are discussed. Its purpose is to explore selected structural and functional considerations which may produce symptoms or compromise homeostasis. It also demonstrates, by example, clinical application of the osteopathic philosophy in selected situations. Lastly, it attempts to show where osteopathic manipulative treatments can be prescribed as primary or adjunctive modalities available to the physician as they assist patients in reaching their maximum health potential.