

April 2002

Ooob, My Aching Back!

In the U.S., back pain is the most frequent cause of activity limitation in people under age 45, the second most frequent reason for seeing a doctor, the third most common reason for surgical procedures.

pages 6 - 18

TOMA's 103rd Annual Convention and Scientific Seminar Early Registration Form and Program Information – pages 24-26

How do smart people manage their money?

They don't!

They hire professionals.

Call us.

DEAN, JACOBSON FINANCIAL SERVICES, LLC

3112 West 4th Street (76107) P.O. Box 470185 Fort Worth, TX 76147-0185 Local 817-335-3214 Metro 972-445-5533 Toll Free 800-321-0246

(SECURITIES SOLD THROUGH LINSCO/PRIVATE LEDGER, A REGISTERED INVESTMENT ADVISER) (MEMBER NASD/SIPC)

TEXAS DO.

APRIL 2002

Terry R. Boucher, M.P.H. Executive Director · Editor in Chief

Paula Yeamans Associate Executive Director

Lucy Gibbs, CAE Membership Coordinator

Jill Weir, CAE Projects Coordinator

Sherry Dalton Publications Coordinator

> Trisha Moran Receptionist

Texas D.O. is the official publication of the Texas Osteopathic Medical Association.

Published eleven times a year, monthly except for July. Subscription price is \$50 per year.

Texas D.O. does not hold itself responsible for statements made by any contributor. The advertising contained in this magazine is not necessarily endorsed by the Texas Osteopathic Medical Association.

Published by the Texas Osteopathic Medical Association, Volume LIX, No. 4, April, ISSN 0275-1453.

> PUBLICATION OFFICE 1415 Lavaca Street Austin, Texas 78701-1634 800-444-8662 or 512-708-8662 FAX: 512-708-1415 E-mail: toma@txosteo.org Website: www.txosteo.org

Copy and Advertising deadline is the 10th of the month preceding publication.

Executive Committee

Mark A. Baker, D.O. President

James E. Froelich, III, D.O. President-Elect

> Jim W. Czewski, D.O. Vice President

Bill V. Way, D.O. Immediate Past President

Rodney M. Wiseman, D.O. Past President

> Irvin E. Zeitler, D.O. Chair, Department of Professional Affairs

Hector Lopez, D.O. Chair, Department of Public Affairs

> Daniel W. Saylak, D.O. Chair, Department of Development & Liaison

INSIDE THIS ISSUE

Clinical Focus: Back Pain Current Issues in the Treatment of Back Pain by Eric E, Gish, D.O. and Jerry C. McGill, Ph.D. Behavioral Treatments for Back Pain 10 by Jerry C. McGill, Ph.D., James R. Hall, Ph.D. and Susan Franks, Ph.D. Osteopathic Manipulative Treatment for Low Back Pain 12 by John C. Liccardone, D.O. Somatic Dysfunction in Low Back Pain 14 by Brooks M. Blake, D.O. The Oxycontin Controversy 17 by Michael D. Baldovshy, MSIII, Gary W. Binkley, MSIII and Scott Stoll, D.O., Ph.D.

Protocols
Preparticipation Physical Evaluation of Athletes – New and Improved
In Memoriam
TOMA's 103rd Annual Convention and Scientific Seminar
Early Registration Form
Program Schedule
ATOMA Annual Golf Tournament Form
Texas Practice Sites
Opportunities Unlimited

Articles in the Texts D.O. that mention the Texts Osteopathic Medical Association's position on state legislation are defined as "legislative advertising" according to Texts Gov't Code Am §305.027. Disclosure of the name and address of the person who contracts with the printer to publish the legislative advertising in the Texts D.O. is required by that law: Terry R. Boucher, Executive Director, TOMA, 1415 Lavaca Street, Austin, Texas 7870-1634.

Board of Trustees

Kenneth S. Bayles, D.O. George M. Cole, D.O. Joseph A. Del Principe, D.O. Patrick Hanford, D.O. Bobby D. Howard, D.O. Hector Lopez, D.O. Jack McCarty, D.O. Elizabeth Palmarozzi, D.O. Robert G. Parrott, D.O. Daniel W. Saylak, D.O. Monte E. Troutman, D.O. Paul S. Worrell, D.O. Irvin E. Zeitler, D.O.

Ex Officio Members of the Board of Trustees

A. Duane Selman, D.O. Speaker, House of Delegates

Ray L. Morrison D.O. Vice Speaker, House of Delegates

Joseph Montgomery-Davis, D.O. Board Consultant for Health Affairs

> S/D Scott Young Student Member

Mr. Terry R. Boucher Executive Director

ATOMA President Susan Selman

CALENDAR OF EVENTS

APRIL 11 – 14

"17th Annual Clinical Conference"

Sponsored by the American Osteopathic Academy of Sports Medicine

Location: Omni Shoreham Hotel, Washington, D.C.

Topics to include: strength training updates, the latest on upper extremity diagnosis and treatments, hands-on workshops, OMT workshop, updates on various injection therapies, concussion management.

Contact: AOASM

7600 Terrace Ave., Suite 203 Middleton, WI 53562 info@aoasm.org or www.aoasm.org 608-831-4400; FAX 608-831-5122

APRIL 18

"D.O. Day on Capitol Hill"

Sponsored by the American Osteopathic Association Contact: AOA, 800-621-1773

APRIL 19 – 20

"16th Annual Spring Update for Family Practitioners"

Sponsored by the University of North Texas Health Science Center at Fort Worth

Location:	Dallas Southwest Medical Center, Dallas, TX
CME:	13 hours category 1-A credits anticipated
Contact:	UNTHSC Office of CME at 817-735-2539 or
	800-987-2CME or www.hsc.unt.edu

APRIL 19 – 22

"Left-Brained Cranial Manipulation Course"

Sponsored by The Cranial AcademyLocation:Radisson Hotel O'Hare, Chicago, ILCME:32 hours category 1-A credits anticipatedContact:The Cranial Academy8202 Clearvista Parkway, #9-DIndianapolis, IN 46256317-594-0411; FAX: 317-594-9299

APRIL 20

"57th Annual Meeting of the TOMA House of Delegates"

Location: Austin Marriott North at Round Rock Contact: Paula Yeamans TOMA Associate Executive Director 800-444-8662 or 512-708-8662

APRIL 25 – 28

"102nd Annual Convention"

Sponsored by the Oklahoma Osteopathic AssociationLocation:Shangri-La Resort, Afton, OKContact:Lynette McLain, OOA800-522-8379 or 405-528-4848lynette@okosteo.org

MAY 2 – 5

"105th Annual Convention"

Sponsored by the Indiana Osteopathic AssociationLocation:Adam's Mark Hotel Downtown, Indianapolis, INCME:30 hours category 1-A credits anticipatedContact:IOA, 800-942-0501 or 317-926-3009

MAY 5 – 10

"20th National Conference"

Sponsored by the Association of Military Osteopathic Physicians and Surgeons

Location: Tucson, AZ

Contact: James M. Yonts, AMOPS

410-519-8217; fax 410-519-7657

jyonts@amops.org or www.amops.org

Note: AMOPS's conference is open to D.O.s who are not in the military.

JUNE 12 – 16

"TOMA 103rd Annual Convention and Scientific Seminar"

Sponsored	by the Texas Osteopathic Medical Association
Location:	Reniassance Austin Hotel, Austin, TX
CME:	26.5 hours category 1-A credits anticipated
Contact:	TOMA, 800-444-8662 or 512-708-8662

JULY 19 - 21

"AOA House of Delegates Meeting"

Location: Fairmont Hotel, Chicago, IL Contact: Ann M. Wittner, AOA 800-621-1773, Ext. 8013; 312-202-8013 awittner@aoa-net.org

AUGUST 1 – 4

"TxACOFP 45th Annual Clinical Seminar"

Sponsored by the Texas Society of the American College of Osteopathic Family Physicians Location: Wyndham Arlington Hotel, Arlington, TX Contact: TxACOFP, 888-892-2637

AUGUST 17 - 18

"OMT – Ligamentous Articular Strain Techniques for Treating the Rest of the Body Based on Sutherland's Methods"

Presented by the Dallas Osteopathic Study GroupLocation:Doubletree Hotel Campbell Centre, Dallas, TXCME:16 hours category 1-A credits anticipatedContact:Conrad Speece, D.O., Course Director214-321-2673

Personal D.O. and OMT Help Olympic Speed Skater to Compete Despite Injury Osteopathic Manipulative Treatment Becoming More Common in Sports Medicine

Olympic speed skater, Apolo Anton Ohno received osteopathic manipulative treatment (OMT) prior to the 1,500 meter Short Track race in which he won the gold medal. After Ohno suffered a gash on his leg requiring stitches during a collision in a previous race, Lawrence Lavine, D.O., Ohno's personal physician from Tacoma, Washington, flew to Salt Lake City to assist U.S. team physicians in treating him.

Dr. Lavine, who is board certified in osteopathic manipulative medicine, explained that he used advanced forms of OMT to treat Ohno. "Basically, I used osteopathic manipulative medicine to release the injury pattern," asserts Dr. Lavine. "By relieving structure and tissue restrictions, you allow the body to begin healing itself more rapidly. When I treated Apolo, it was not a matter of dealing with just the leg, it was a matter of going through his entire body and cleaning out every bit of strain pattern. The whole purpose of what I do is to restore the health, remove the strain and let the body heal itself."

A study published in the November 4, 1999 issue of the *New England Journal of Medicine* shows OMT to be an effective form of medical treatment. Patients who participated in the study, who received OMT, required significantly less medication and used less therapy, resulting in lower costs and fewer side effects.

Ohno's father, Yuki Ohno, describes his son's recovery. "Sunday, when the treatment started, his leg was swollen and sore. On Monday he was still experiencing some pain," he recalls, "but then by Tuesday, the pain was gone, there was no swelling and he started practice again."

"What I did was enable Ohno not to take anti-inflammatory drugs," Dr. Lavine commented, "which was important in this case because any drug you put into an athlete at his level is going to slow him down."

During the months leading up to the Games, Dr. Lavine worked intensively with Ohno. "Ohno originally came to me so I could relieve discomfort he was experiencing in his back and restore normal function," recalls Dr. Lavine. Utilizing a variety of osteopathic manipulative treatments, Dr. Lavine focused on removing restrictions across Ohno's entire body to help relieve his discomfort and restore normal function. "I don't make him a great skater." Dr. Lavine clarifies, "He makes himself a great skater. I just help to relieve the restrictions that block the full expression of his talent."

Steven Karageanes, D.O., team physician for the Detroit Tigers, also recognizes the benefits that OMT offers athletes. "Manipulation is extremely beneficial to athletes because of the time constraints they have when healing," says Dr. Karageanes, a sports medicine and orthopedic osteopathic specialist. "OMT helps to speed up recovery by restoring function faster, and also aids in diagnosis, as well."

Gunnar Brolinson, D.O., a team physician for the U.S. Ski Team and a volunteer physician for the U.S. Olympic Committee, points out that athletes who do not suffer from specific injuries can also benefit from OMT. "An athlete having performance problems may have structural imbalances," says Dr. Brolinson. "OMT can fix that. I've used it on skiers literally in between runs."

Just as Dr. Brolinson treats skiers between runs, Dr. Lavine and the U.S. team physicians treated Ohno between races. As an osteopathic physician, Dr. Lavine stresses the importance of meeting the needs of the patient. "It's definitely a team effort," he recognizes. "It's all of us working together in the best interest of the patient."

Correction

Please refer to the January 2002 issue of the Texas D.O. magazine, page 6. In the article "A Closer Look at Chronic Daily Headaches," by Charles A. Popeney, D.O., the first sentence should have read as follows:

An estimated 38,000,000 persons suffer from migraine headache in the United States at an estimated cost of nearly 13 billion USDA.

In addition, on page 7, illustration figure 1 and figure 2 have been reversed.

Our apologies to Dr. Popeney.



CURRENT ISSUES IN THE TREATMENT OF BACK PAIN

by Eric E. Gish, D.O. and Jerry C. McGill, Ph.D.

Introduction

Low back pain is a common and costly problem frequently encountered in the primary care setting. In fact, one study shows back pain afflicts greater than 31 million Americans and is the primary cause of activity limitation in young adults. Because of the frequency of its occurrence, back pain places a tremendous burden on the health care system in all industrialized countries and initial care is most commonly sought in the primary care health setting.² Studies have shown that in 1996, the average annual productivity losses per worker due to chronic backache had reached \$1,230 for male workers and \$773 for female workers. This yields an aggregate annual productivity loss of approximately \$28 billion.¹ Consequently, much time and effort has been spent in finding ways to treat low back pain more efficiently and with better efficacy. Along with these efforts, there is much interest is trying to identify and treat factors.

The incidence of chronic pain is relatively high. In fact, a recent study showed that 46.5% of the general population self reported chronic pain. Of this population, the most common diagnoses mentioned, accounting for 1/3 of all complaints, were back pain and arthritis.³ Another interesting factor that played a role in the incidence of back pain was the educational level of the afflicted. In a retrospective study of 64 articles published between 1966 and 2000, there was evidence, which pointed to a strong association of low education with longer duration and/or higher recurrence of back pain. Also noted was that the course of such an episode was less favorable.⁴ Thus, it is shown that less well educated people were more likely to be affected by back pain and thus lead to disability.⁴

As a result of the frequency of this diagnosis, many countries have tried to create protocols and guidelines to help treat back pain, and thus, limit productivity losses, minimize its progression to a chronic state, and shorten the term of disability associated with this condition. Many disciplines and approaches of health management have been utilized with varying degrees of success. As a result, guidelines and modalities for treating this health care entity are constantly changing and merit review. Therefore, this article will examine the factors affecting the diagnosis of low back pain and its progression to a chronic state, as well as various treatment guidelines for this condition.

Review of Management Guidelines

A review of recent literature suggests that the mainstays of treatment in 11 different countries for acute low back pain include acetaminophen, nonteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, and maintaining a level of activity within limits permitted by pain.²⁵ Interestingly, most agencies promoted the use of acetaminophen over NSAIDs due to an improved safety profile with respect to side effects. However, patients who have or develop hepatic insufficiency should refrain or be monitored closely if using any preparation containing acetaminophen. Single entity opioid regimen use is still controversial, especially in chronic back pain, as compared to NSAIDs. In fact, one recent study suggests that while opioid therapy has a positive effect on pain and mood, there is little effect on activity and sleep. Furthermore, the same study suggested that while opioid therapy for chronic back pain was used without significant abuse potential, the regimen utilized was considered palliative and without long term benefit.⁶

While recommendations regarding medication use seem fairly consistent worldwide, the use of spinal manipulation differs significantly among countries. While a few countries did not recommend its use, most countries accept its use but varied on when it should be incorporated into treatment. One pitfall of this study was that the type of manipulation, and by whom it was performed, was not specified. This may be one of the reasons why it is so difficult to determine when

"...weight reduction should be considered for patients with back pain if they are above a body mass index of 25."

and by whom this modality should be utilized.² The clinical guidelines for the United States in these articles recommended the use of spinal manipulation within the first month of treatment and found it to be safe in the absence of radicular symptoms.²⁵

Yet another consistency common in this comparison between countries was the use of bed rest. Interestingly, the United States seemed to be the most liberal country regarding bed rest and recommended between 2 to 4 days. All other countries either discouraged bed rest or limited it to a maximum of 2 days. Therefore it would seem likely that early activity, as tolerated, is an essential component to resolution of low back pain.²

Factors Influencing Diagnosis

Predictive Factors

Over the years, several studies have investigated predictive factors for developing, as well as the resolution, of low back pain. Risk factors for developing low back pain include smoking, obesity, degree of disc herniation, lack of sports activities, night shift work, and previous back pain leading to being absent from work, 7,8.9,10 Smoking was associated with an increased severity and frequency of daily symptoms compared to non-smokers.8 Clearly, smoking should be discouraged in patients with back pain. In another study, the functional status of individuals was compared to their type of pain. It was found that as radiating leg pain increased, the functional status of the patient decreased. Consequently, as the functional status of the subjects declined. there was found to be an increase in the number of imaging studies ordered by the attending physician.11 Furthermore, Fanuele, et al examined the association between obesity and functional status. It was concluded that obese patients were more likely to have radicular pain and neurologic signs and, therefore, a decrease in functional status. As a result, they were more likely to receive worker's compensation.9 Consequently, weight reduction should be considered for patients with back pain if they are above a body mass index of 25.9.10 As briefly discussed, several lifestyle factors may positively modify the outcome of back pain if they are reduced or eliminated. These factors include smoking cessation, weight reduction, and encouraging activity.

Imaging and Screening Exams

Another confounding issue that influences diagnosis is the reliability of screening exams. Studies historically have related good reliability with lumbar range of motion (LROM) and straight leg raise (SLR) tests. However, recent studies suggest that these may not be as applicable as once thought in the clinical setting. One reason may be the lack of a controlled scientific environment and lack of consistent endpoints to these tests. For example, in a recent article, it suggested the AMA Guides (used to determine permanent disability ratings) did not appear to contain a definition of the SLR test or a description of the most appropriate endpoint for this test. The article further stated the experimental conditions in which these tests were validated were highly rigorous aetting.¹²

While the physical examination is an essential component of the diagnosis of low back pain, many physicians rely upon imaging studies to help confirm their diagnoses. However, these tests also have their limitations with respect to cost and diagnostic value. For example, in a study performed by Atlas et al, it was confirmed that sophisticated imaging tests were not proven to be cost effective in the majority of low back pain cases. One reason for this was that most back symptoms were nonspecific and the precise cause of low back pain is rarely identified on imaging studies. Therefore, the recommended use of these imaging studies was utilization based on the neurologic findings, discovered on the history and physical examination, and the initial response of the patient to treatment.13 One author succinctly stated that imaging may increase diagnostic confidence but had minimal influence on the diagnostic or therapeutic decisions for patients with low back pain unless a clear indication developed.14

Psychological Issues

While generally accepted that depression and anxiety are common findings in patients with chronic low back pain, disagreement still persists regarding somatoform disorders. Recent data investigated the effects of undergoing a discectomy and the psychic stressors in which that experience produced. While noting the mental quality of life improved in all groups, patients who had undergone previous surgery with concomitant persistent pain had a higher tendency toward developing a somatoform tendency. They theorized that this was possibly due to the tissue damage produced by surgery and that this could have influenced the course of the illness. They further stated that this could be considered a distinct factor that was independent from anxiety and depression.¹⁵

Another issue that came to surface during literature review was that of the perception of our interactions by our patients. As physicians, we need to constantly monitor how our patients perceive our reactions towards their symptoms. As an illustration, one study concluded that when physicians could not locate the etiology or expressed doubt regarding the possibility of a solution, patients felt that their pain was "disconfirmed" and became alienated by the physician. The study further concluded that perhaps a more generalized understanding of pain could provide a greater sense of legitimacy for back pain patients.16 This belief was further illustrated in other literature which relayed that the outward appearance of pain, particularly of chronic nature, was often mismatched with what the patient perceived. As such, it may create an environment of mistrust between patient and physician and lead to magnification of the psychosocial distress experienced by these patients.

Factors Affecting Chronicity

In order to prevent chronic low back pain from developing, one needs to have an understanding of how chronic pain develops. It is generally supported by the literature that chronic pain develops over a progression from acute, to subacute, and finally to chronic. continued on next page

Transition of Acute to Subacute Pain

This transition involves the initiation of 2 separate forms of neural sensitization: peripheral and central. Peripheral sensitization occurs when the tissue itself is injured and the inflammatory mediators sensitize the nociceptor nerve endings in the skin and deep tissues. As a result, this facilitates pain impulses (primarily through C fibers) to fire, which would otherwise be deemed insignificant by the central nervous system. Central sensitization occurs within the central nervous system and amplifies the perception of painful stimuli. There is some evidence that the N-methyl-D-Aspartate receptor may be involved as it is stimulated by glutamate. Also of interest is that it appears the fibers involved in touch convert normal stimuli to painful stimuli during the process of central sensitization. Thus, there is an amplification of pain perception when these two types of neurons are stimulated.17

Role of Preemptive Analgesia

In light of the above findings regarding the transition of acute to subacute pain, much research has been initiated into the hypothesis that preemptive analgesia may prevent subacute pain. As a result of halting the development of subacute pain, the incidence of chronic pain would also be diminished. The mainstay drugs in this arena include NSAIDs and opiates. The focus of these studies has been to block the arrival of nociceptive input to the spinal cord by decreasing the amount of peripheral inflammation (utilizing NSAIDS) and altering the nociceptive spinal input (utilizing opiates). The downfall of this strategy is that in order to prevent painful stimuli from entering the system, one needs to know when painful stimuli will occur (i.e., surgical procedures).17 However, this literature does suggest that early and aggressive treatment for pain control may help to reduce the conversion to chronic pain by controlling peripheral and central sensitization.

Transition from Subacute to Chronic Pain

This process seems to progress along a continuum with many psychosocial factors playing a role in its development. There is no sudden definable moment in which this transition occurs. Rather, the influence of behavior and personal outlook by the patient, with respect to social and family interactions, appears to play a role. Behavioral changes may take on several different

appearances. However, changes in gait, posture, or other physical behaviors can lead to compensatory changes in the body over time and lead to disorders of the spine osteoporosis, and degenerative changes in the bones, ligaments, joints, and connective tissues.17 Another event that can occur is the phenomenon of centralization. This belief is one that states if pain occurs long enough it will eventually "burn its way into the CNS." There is a presumption of a fundamental change in the mechanism of pain such that previous modalities of treatment become ineffective. Therefore, pain that was at one time able to be treated with conservative measures becomes recalcitrant to these modalities, rendering them less efficacious.17 The neural substrates involved in this process are still not well understood.

Lifestyle Factors that Influence Chronicity of Pain

In an attempt to predict workers who will develop chronic back pain, several studies have examined self reported factors which may affect the chronicity of pain. In one such study, there was a positive correlation associated with severe leg pain, Oswestry Disability Indices above minimal disability, obesity, and unavailability of light duty activity upon returning to work.¹⁰ The

Back Pain and Time Lost from Work

A total of 1.7 million injuries and illnesses that required recuperation away from work beyond the day of the incident were reported in private industry workplaces during 1999, according to a survey by the Bureau of Labor Statistics, U.S. Department of Labor. The total number of these cases was about the same as in 1998, following steady decline from the levels prevailing early in the decade. As in the preceding six years, more than 4 out of 10 injuries and illnesses resulting in time away from work in 1999 were sprains or strains, most often involving the back.

Sprain and strain was, by far, the leading nature of injury and illness in every major industry division, ranging from 33 percent in agriculture, forestry, and fishing to nearly 50 percent in services. The trunk, including the back, was the body part most affected by disabling work incidents in every major industry division, except for agriculture, forestry, and fishing. Most other injures and illnesses were to upper or lower extremities.

The U.S. Department of Labor defines a musculoskeletal disorder (MSD) as an injury or disorder of the muscles, nerves, tendons, joints, cartilage, and spinal discs. MSDs do not include disorders caused by slips, trip, falls, motor vehicle accidents, or similar accidents. Over 582,000 musculoskeletal disorders were reported, accounting for more than one out of three of the injuries and illnesses involving recuperation away from work. Although both total injuries and illnesses with days away from work and MSDs have decreased since 1992, MSDs continue to account for more than one in three of the total lost worktime cases.

Three occupations - nursing aides, orderlies, and attendants; truck drivers and labors, non-construction - together account for one out of five musculoskeletal disorders.

("Lost-Worktime Injuries and Illnesses: Characteristics and Resulting Time Away from Work, 1999," News release. March 28, 2001. Bureau of Labor Statistics)

majority of these factors mirror those discussed earlier and further support the idea that external influences have a large impact on chronicity of pain.

Treatment Options

While there are several treatment guidelines available, this article will focus on those created by the Institute for Clinical Systems Improvement (ICSI) and updated in May of 2001. This guideline begins with patient education regarding primary prevention. As a result, patients should be counseled on various mechanisms of injury and how to prevent them (i.e., proper lifting mechanics). The guidelines then recommend a triage phase. During this section patients are divided into the categories of urgent and non urgent requiring evaluation. If an evaluation is not deemed appropriate during that time, the patient may be instructed to undergo a home self-care treatment program. However, if their condition does not improve or evaluation is deemed necessary, the patient should be evaluated by a primary care physician to determine if a serious underlying condition exists (leading to a referral to the appropriate specialist). If it is determined that no underlying serious condition exists, acute patients are treated with conservative treatments (NSAIDs, opiates, muscle relaxants). Trained spinal therapy may be added if there has not been resolution of symptoms within 1-3 weeks. Chronic patients without radiation past the knee should receive lumbar xrays in addition to exercise and/or back school. If no improvement is observed while receiving the above conservative treatments, then the patient should be referred to a specialist. Patients who develop sciatica should, likewise, be ordered an MRI or other imaging study as appropriate, and if positive findings are discovered should be referred to a surgical back specialist.19

The use of manipulation, although somewhat controversial, should be used early on in the process once surgical indications have been ruled out. In fact, one set of guidelines recommended the use of spinal manipulation within the first month of onset.² The discussion of spinal manipulation in low back pain is extensive and exceeds the scope of this article. However, it should be noted that the gentler treatment styles utilizing indirect and muscle energy techniques are, perhaps, a more appropriate option during the acute phase of treatment. Ongoing research is being conducted in this field of medicine to determine when and what styles of spinal manipulation are the most beneficial.

Summary

Low back pain is a common and costly condition not only in the United States, but in all industrialized countries. Early and aggressive treatment should be encouraged to prevent the transition from acute to chronic pain and debilitation. Guidelines encourage the early and aggressive use of acetaminophen (or NSAIDs), muscle relaxants and, to a lesser degree, opiates to prevent this transition to chronic pain. Surgical intervention may be necessary in patients exhibiting neurological deficits or significant findings on imaging studies. Education, behavioral modification, spinal manipulation and physical therapy should be considered as powerful adjuncts to conventional practices to help accelerate recovery from this condition. As a result of integration of these modalities, a decreased burden should befall the patient and society.

References

- Rizzo JA. Abbott TA. Berger ML. The labor productivity effects of chronic backache in the United States. Medical Care 1998,30(10):1471-88.
- Koes BW, Van Tulder MW, Ostelo R, Burton AK, et al. Clinical guidelines for the management of low back pain in primary care. Spine 2001, 26:2504-14.
- Sahlstrand T. A prospective study of preoperative and postoperative sequential magnetic resonance imaging and early clinical outcome in automated percutaneous lumbar discectomy. Journal of Spinal Disorders 1999,12(5):368-74.
- Dionne CE, Von Korff M, Koepsell TD, et al. Formal education and back pain: a review. Journal of Epidemiology and Community Health 2001,55(7):455-68.
- Harwood MI, Chang S. What is the most effective treatment for acute low back pain? Journal of Family Practice 2002,51(2),118.
- Jamison RN, Raymond SA, Slawsby EA, et al. Opioid therapy for chronic noncancer back pain: A randomized prospective study. Spine December 1, 1998,23(23):2591-600.
- Elfering A, Semmer N, Birhofer D, et al. Young investigator award 2001 winner: Risk factors for lumbar disc degeneration. Spine 2002, 27(2):125–34.
- Vogt MT, Hanscom B, Lauerman W. Influence of smoking on the health status of spinal patients. Spine 2002,27(3):313-19.

- Fanuele JC, Abdu WA, Hanscom B, et al. Association between obesity and functional status in patients with spine disease. Spine 2002;27(3):306-12.
- Hellsing AL, Bryngelsson IL. Predictors of musculoskeletal pain in men: A twenty year follow up from examination at enlistment. Spine 2001,25(23)3080-86.
- Ren Xinhua, Selim AJ, Fincke G, et al. Assessment of functional status, low back disability, and use of diagnostic imaging in patients with low back pain and radiating leg pain. Journal of Clinical Epidemiology 1999,52(11):1063-71.
- Hunt DG, Zuberbier OA, Koclowski AJ, et al. Reliability of the lumbar flexion, lumbar extension and passive straight leg raise test in normal populations embedded within a complete physical examination. Spine 2001;26(24):2714-18.
- Atlas SJ, Deyo RA. Evaluating and managing acute low back pain in the primary care setting. Journal of General Internal Medicine 2001,16(2):120-31.
- Gillan MB, Gilbert FJ, Andrew JE, et al. Influence of imaging on clinical decision making in the treatment of lower back pain. Radiology 2001,220(2):393-9.
- Nickel R, Egle UT. Eysel P, et al. Health-related quality of life and somatization in patients with long-term low back pain. Spine 2001,26(20):2271-77.
- Rhodes LA, McPhillips-Tangum CA, Markham C, et al. The power of the visible: The meaning of diagnostic tests in chronic back pain. Social Science & Medicine 1999,48(9):1189-203.
- Niv D, Devor M. "Transition from Acute to Chronic Pain," <u>Evaluation and Treatment of Chronic Pain</u>, Aronoff GM, 3rd ed., Baltimore, Williams and Wilkins, 1999;27-45.
- Frensen M, Woodward M, Norton R, et al. Risk factors associated with the transition from acute to chronic occupational back pain. Spine 2002,27(1):92-8.
- Kopmeiners M, Marshall P, Gorman R, et al. Health Care Guideline: Adult Low Back Pain, Institute for Clinical Systems Improvement, May 2001.

Eric E. Gish, D.O., is Assistant Professor in the Department of Osteopathic Manipulative Medicine at the University of North Texas Health Science Center, Fort Worth, Texas. He also serves as Director of the Predoctoral Fellowship. Dr. Gish is certified in Family Medicine and in OMT.

Jerry C. McGill, Ph.D., Associate Professor, Department of Osteopathic Manipulative at the University of North Texas Health Science Center at Fort Worth, is a psychologist specializing in health psychology and pain management. He also serves as chair of the Institutional Review Board and is on the internal advisory board for the Osteopathic Research Center.

Behavioral Treatments for Back Pain

by Jerry C. McGill, Ph.D., James R. Hall, Ph.D. and Susan Franks, Ph.D.

Behavioral factors have been found to play a major role in the genesis of back pain, the progression of pain from acute to chronic, and in the maintenance of chronic pain. Thus it is important to address behavioral and emotional issues from the beginning of the evaluation and treatment process.

The correlation between pain and mood state, particularly depression, has been well documented.¹³ Linton in his comprehensive review found that stress, distress, anxiety, mood and emotions, cognitive function, and pain behavior were all related to subacute or chronic pain.³ Additionally, lifestyle risk factors such as smoking and obesity have been found to have a significant impact on the reported severity of symptoms of patients with low back pain.⁴⁵

As pain moves from the acute to the chronic stage, behavioral factors continue to play an increasingly important role. One study of 854 workers compensation claimants found that both physical factors (e.g., degree of disability, severity of radiating pain and obesity), along with psychological conditions (e.g., anxiety, depression and insomnia), contributed to the likelihood a claimant would develop chronic pain.6 It was also shown that prior experience with trauma, including prior injuries and emotional trauma increased the likelihood a patient would develop chronic back pain. Chronic pain appears to develop through a true physiological-psychological paradigm, where behavioral and emotional issues not only influence how pain is experienced, but the actual pathophysiology of pain.7

Behavioral Prevention and Treatment

When asked, "When does chronic pain start?" one veteran pain specialist responded, "The day before the injury!" Although that may be an overstatement, there are numerous risk factors that may already be present when the patient presents with a pain complaint. Therefore, one of the first steps in treating pain behaviorally is the identification of risk factors and prevention of chronicity.

The pain evaluation should include a careful elicitation of the pain complaint, including not only location, but also the severity, quality, and factors exacerbating or decreasing the pain. It should also include a history of prior injuries, family history, work history and current work environment, as well as a psychological history. The presence of psychopathogy with particular attention to depression and anxiety should be assessed. Patients may at first be reluctant to reveal some relevant information, such as a history of physical or sexual abuse, so the physician needs to be alert to nonverbal cues and emotional responses. As with any sensitive information, probing should be gentle and only done as the patient develops trust in the treatment relationship.^{7,8}

> Early intervention involves the treatment of comorbid risk factors. Depression and anxiety can interfere with the patient's ability to respond to treatment and should be treated aggressively. Patient education can be helpful in ensuring a clear understanding of what you want them to do at home. It also helps the patient develop realistic expectations and a positive attitude toward treatment. In addition to direct education by the physician, "back school" programs, where the patient is taught about body

mechanics, exercise, and given stress management tools, have been found to be helpful. A recent study of "self care" programs found that patients receiving a brief self care program conducted by a psychologist showed signifi-

cantly less worry, less fear and lower pain ratings than patients receiving "usual care".10

In addition to these valuable approaches, a number of other behavioral interventions are useful with back pain. These interventions can be of value with acute pain but are of particular importance when treating subacute or chronic pain. They not only help the patient cope with pain more effectively, but they may also reduce the

need for or even replace medication.

Hypnosis

Hypnosis is one of the oldest behavioral interventions in medicine, with a history of use going back to the Egyptians and Greeks. Hypnosis can be a rapid and powerful way to reduce anxiety and induce relaxation and, for a subset of patients, can block pain entirely. It is easy to use and can be applied rapidly. Factors such as the hypnotizability of the patient and the skill and experience of the physician will influence the value of hypnosis. It is important to recognize that hypnosis is a technique and not a profession and is most effective when used by trained health care professionals as part of the overall medical approach.

Visualization and Relaxation

Relaxation can help with both anxiety reduction and enhancing the patient's sense of control. A variety of effective techniques are available, including guided imagery, progressive relaxation, and breathing exercises. If performed within the physical restrictions prescribed by the physician, patients often report that Yoga and Tai "...the core element is a cognitive-behavioral approach to pain emphasizing function rather than pain symptoms, and self-care rather than dependence on the health care system for relief."

Chi are particularly helpful because they combine breath training, relaxation, and exercise into an integrated whole.

Biofeedback

Biofeedback is a training technique using electronic instrumentation to "feed back" information to the patient. The patient is taught to control the feed back to gain control of the target physical variable, e.g., muscle activity, blood flow, respiration, autonomic activity, or E.E.G. activity. With pain management, the most common uses are general relaxation training and reduction in muscle tension. It can also be used as a retraining or educational tool in patients who have abnormal movement or ergonomic issues. As with hypnosis, biofeedback is most effective when used by a trained clinician as part of the overall treatment strategy.

Cognitive-Behavioral Therapy

Research has shown that Cognitive-Behavioral therapy is the most effective psychotherapuetic tool for pain patients.¹¹ Cognitive therapy helps the patient modify their thoughts and beliefs about the pain. It focuses on helping the patient approach their pain realistically and developing a positive future orientation emphasizing what they can do rather than what they cannot do because of the pain or injury.

Multi-disciplinary Pain Management

A multidisciplinary approach has been found to be most effective approach for those patients who develop chronic pain. ¹² Most pain management programs combine medical, psychological, and social interventions into a single, integrated approach. The program is usually quite intensive, often requiring daily attendance at a multidisciplinary clinic for four weeks or more. Although multiple modalities are involved, the core element is a cognitive-behavioral approach to pain emphasizing function rather than pain symptoms, and self-care rather than dependence on the health care system for relief.

Summary

Behavioral strategies for pain management are now a well developed and effective part of the armamentarium for the management of back pain. They are most effective when integrated with total patient care, and should be part of the strategy for both the prevention as well as the management of subacute and chronic pain.

References

- Wilson, KG, Mikhail, SF, D'Eon, JL, Minns, JE. Alternative diagnostic criteria for major depressive disorder in patients with chronic pain. Pain 2001; 91;227-234.
- Atkinson, JH., Slater, MA, Patterson, TL, Grant, I, Garfin, SR. Prevalence, onset, and risk of psychiatric disorders in men with chronic low back pain: a controlled study. Pain 1991; 45;111-121.
- Linton, SJ. A review of psychological risk factors in back and neck pain. Spine 2000; 25;1148-56.
- Fanuele, JC, Abdu, WA, Hanscom, B, Weinstein, JN. Association between obesity and functional status in patients with spine disease. Spine 2002; 27:306-312.
- Vogt, MT, Hanscom, B, Lauerman, WC, Kang, JD. Influence of smoking on the health status of spinal patients. Spine 2002; 27;313-319.
- Fransen, M, Woodward, M, Norton, R. Coggan, C, Dawe, M, and Sheridan, N. Risk factors associated with the transition from acute to chronic occupational back pain. Spine 2002; 27:92-98.
- Weisberg, MB, Clavel Jr., AL. Why is chronic pain so difficult to treat? Psychological considerations from simple to complex care. Postgrad Med 1999; 106(6);141-64.
- Marcus, D. Treatment of nonmalignant chronic pain. American Family Physician. 2000; 61;1331-8,1345-6.
- van Tulder, MW, Esmail, R, Bombardier C, Koes, BW. Back schools for nonspecific low back pain. The Cochrane Library Issue 1, 2002.
- Moore, JE, Von Korff, M, Cherkin, D, Saunders, K, Lorig K. A randomized trial of a cognitive-behavioral program for enhancing back pain self care in a primary care setting. Pain 2000 88;145-153.
- van Tulder, MW, Ostelo, RWJG, Vlaeyen, JWS, Linton, SJ, Morley, SJ, Assendelft, WJJ. Behavioural treatment for chronic low back pain. The Cochrane Library, Isssue 1, 2002
- Worsham, S, Zeigler, RR, Effective approaches. Practical Pain Management. 2002 Jan/Feb 16-20.

Jerry C. McGill, Ph.D., Associate Professor, Department of Osteopathic Manipulative Medicine, University of North Texas Health Science Center at Fort Worth, is a psychologist specializing in health psychology and pain management. He also serves as chair of the Institutional Review Board and is on the internal advisory board for the Osteopathic Research Center.

James R. Hall, Ph.D., FABMP, is Associate Professor, Department of Internal Medicine (Psychiatry & Geriatrics), at the University of North Texas Health Science Center

Susan F. Franks, Ph.D., is Assistant Professor, Department of Family Medicine (Health Psychology), at the University of North Texas Health Science Center.

Osteopathic Manipulative Treatment for Low Back Pain

A Brief Review of Three Clinical Trials and Their Findings

by John C. Licciardone, D.O.

It is estimated that up to 20% of Americans experience low back pain annually: Low back pain is a common reason for visits to primary care physicians as well as to such specialists as occupational medicine physicians, orthopedic surgeons, and neurosurgeons. The total annual costs of back pain in the United States may reach \$50 billion² or beyond. In a comprehensive evaluation of spinal manipulation for low back pain undertaken by the Agency for Healthcare Research and Quality, spinal manipulation was found to be useful in patients with acute low back problems without radiculopathy when used within the first month of symptoms.³

There have been two major randomized controlled trials of osteopathic manipulative treatment (OMT) for low back pain published in the United States.^{4,5} Recently, a third randomized controlled trial of OMT was completed at the Texas College of Osteopathic Medicine (TCOM) of the University of North Texas Health Science Center. The table provides a summary of selected aspects of these major studies.

Together, these three trials span almost 30 years. Interestingly, the trials have evolved to focus on use of OMT in persons with acute, then subacute, and, finally, chronic cases of low back pain. The older subjects enrolled in the TCOM trial reflect its focus on chronic low back pain. The higher percentage of men among participants in the early trial may reflect its focus on acute low back pain, particularly if many of these cases were work related.

An important aspect of these OMT trials concerns the use of control groups. In testing an experimental new drug, the gold standard for determining efficacy is the randomized, doubleblind, placebo-controlled trial. The use of an inert placebo capsule facilitates double blinding in such studies. In trials of a physical intervention such as OMT, however, the issues of placebo control and blinding are much more problematic. Also, because OMT is almost always used in conjunction with other treatments for low back pain such as analgesics, anti-inflammatory agents, muscle relaxants, and physical therapy, clinical trials generally study OMT as a complement to usual or standard care.

Two types of control groups in OMT trials include those who receive "sham manipulation" along with their usual care and those who receive usual care without any other intervention. There are at least two important problems with using no-intervention controls; the participants are likely to deduce that they are controls (i.e., they will become unblinded regarding their randomized assignment) and they will receive less attention (i.e., real or perceived treatment) for their low back pain. Sham manipulation is intended to overcome these problems. In the process of providing this intervention, however, it is possible that some therapeutic benefit may occur, thereby reducing the efficacy that might otherwise be entirely attributed to OMT. Indeed, a recent review of placebo effects found that in conditions involving pain, there is a small, but consistent, beneficial effect attributed to placebos.6 This placebo effect has been estimated to be the equivalent of one-third of the effect of nonsteroidal anti-inflammatory drugs.7 The TCOM trial is unique in that it includes both sham manipulation and no-intervention controls, thereby allowing a direct comparison of OMT efficacy relative to either control group.

Another interesting methodological issue involves the OMT protocol itself. Should the same rigid OMT protocol be used to treat all participants, or should OMT be individualized to each participant? Should only one OMT techniques be tested, or should the entire spectrum of OMT techniques be available for use? How often should OMT be provided, and by whom? These are just some of the questions that surface in OMT trials.

How generalizable should the results of an OMT trial be? Some trials may attempt to include only those participants whose low back pain is most likely to respond to OMT. These studies may be very selective, screening as many as 20 persons to identify a single trial participant. Others may be much less selective, wishing to determine the benefits of OMT in a wide cross-section of patients with low back pain. The advantage of highly selective recruitment is that OMT is more likely to be found efficacious; its downside is that any favorable results cannot necessarily be extrapolated and assumed to apply to all other types of patients with low back pain. Conversely, less selective trials may be less likely to demonstrate OMT efficacy. However, if OMT efficacy is observed, it is then reasonable to conclude that OMT will be useful in may patients with low back pain.

There are no consistent findings across all three OMT trials. Nevertheless, a few cautious generalizations may be made. First, OMT appears to decrease the use of other co-treatments such as physical therapy. Second, OMT benefits are more evident in comparisons with no-intervention controls than in comparisons with sham manipulation controls. Finally, OMT trials to date have included relatively small numbers of participants, thereby providing only modest chances of observing statistically signifcant, yet clinically relevant, improvements in low back pain and functioning. Additional trials of OMT are clearly needed. Table. Summary of selected aspects of three major randomized controlled trials of osteopathic manipulative treatment for low back pain in the United States,*

TRIAL	Hoehler, et al.	Andersson, et al.	тсом
REFERENCE NO.	4	5	Publication pending
YEARS	1973-1979	1992-1994	2000-2001
LOCATION	California	Illinois	Texas
SETTING	University clinic	Health maintenance organization	University clinic
STAGE OF LOW BACK PAIN	Acute	Subacute	Chronic
	Referred patients with low back pain,	Patients with low back pain of	Recruited subjects with low back pain
	majority of less than 1 month duration	3 weeks to 6 months duration	of at least 3 months duration
CONTROL GROUP(S)	Sham manipulation	No intervention (usual care)	No intervention (usual care) Sham manipulation
NO. OF PARTICIPANTS	1990	1102	100
NO. SCREENED FOR ELIGIBILITY	1880	1193	199
NO. KANDOMIZED	95	155	91
SELECTIVITY (screened to randomized ratio)	High	Intermediate	Low
DI DELOTE LA CALLE LOS DE CONTRACTO	(20)	(8)	(2)
PARTICIPANT CHARACTERISTICS	01177 10.1 0.1		
Age (mean \pm SD)	OM1, 30.1 ± 8.4	$OM1, 28.5 \pm 10.6$	OMT, 49 ± 12
	Controls, 32.1 ± 9.8	Controls, 37.0 ± 11.0	No-intervention controls, 49 ± 12
0.10	C1 100 10	01 (m. 1)	Sham controls, 52 ± 12
Sex (% men)	OM1, 59	OM1, 41	OM1, 31
	Controls, 59	Controls, 44	No-intervention controls, 35
ONTE DEOCTOCOL			Sham controls, 43
OMTPROTOCOL			
Technique(s)	High-velocity, low-amplitude thrust	variety of techniques, individualized to patient	Variety of techniques, individualized to subject
No. of treatments	OMT, mean, 4.8 ± 2.7 Controls, mean, 3.9 ± 2.5	8, per protocol	7, per protocol
OUTCOMES			
Timing of assessment(s)	Following first OMT session1 Intermediate, 20-30 days Long term, 41-51 days	2 weeks	Short term, 1 month Intermediate, 3 months Long term, 6 months
VAS for pain		NS	Vs. no-intervention controls, S† Vs. sham controls, NS
Other pain assessment	First session, S Intermediate, NS Long term, NS		
Roland-Morris Disability Questionnaire		NS	Vs. no-intervention controls, NS Vs. sham controls, NS
Oswestry Questionnaire		NS	
Straight leg raising	First session, S	NS	
Flexion		NS	
Extension		NS	********
Medication use		S	Vs. no-intervention controls, NS Vs. sham controls, NS
Physical therapy use		S	Vs. no-intervention controls, S‡ Vs. sham controls, NS
Patient satisfaction		NS	Vs. no-intervention controls, S† Vs. sham controls, NS
Lost work or school days		********	Vs. no-intervention controls, NS Vs. sham controls, NS

* TCOM denotes Texas College of Osteopathic Medicine; OMT, osteopathic manipulative treatment; SD, standard deviation; VAS, visual analogue scale; S, statistically significant results favoring OMT. NS, not statistically significant results, fSignificant across all time intervals, fSignificant only at 6 months (physical therapy was combined with other co-treatments). continued from previous page

References

- Andersson GBJ. The epidemiology of spinal disorders. In: Frymoyer JW, ed. The Adult Spine: Principles and Practice. 2nd ed. Philadelphia, PA: Lippincott-Raven; 1997:93-141.
- Nachemson AL. Newest knowledge of low back pain. A critical look. Clinical Orthopaedics and Related Research. 1992;279:8-20.
- Bigos S, Bowyer O, Braen G, et al. Acute Low Back Problems in Adults. Clinical Practice Guideline No. 1-4. Rockville. MD: Agency for Health Care Policy and Research. Public Health Services, U.S. Department of Health and Human Services; 1994.
- Hoehler FK, Tobis JS, Buerger AA. Spinal manipulation for low back pain. Journal of the American Medical Association. 1981;245:1835-1838.
- Andersson GB, Lucente T, Davis AM, Kappler RE, Lipton JA, Leurgans S. A comparison of osteopathic spinal manipulation with standard care for patients with low back pain. New England Journal of Medicine. 1999;341:1426-1431.
- Hróbjartsson A, Gozsche PC. Is the placebo powerless? An analysis of clinical trials comparing placebo with no treatment. New England Journal of Medicine. 2001;344:1594-1602.
- Gotzsche PC. Sensitivity of effect variables in rheumatoid arhiritis: a meta-analysis of 130 placebo controlled NSAID trials. Journal of Clinical Epidemiology. 1990;43:1313-1318 [erratum, 1991; 44:613].

John Licciardone, D.O., is a Professor and Director of Grants and Funding in the Department of Family Medicine, Texas College of Osteopathic Medicine, University of North Texas Health Science Center, Fort Worth, Texas. He is principal investigator for the TCOM clinical trial described herein. The study was supported by a grant from the American Osteopathic Association (No. 99-11-487). Dr. Licciardone may be reached at 3500 Camp Bowie Boulevard, Fort Worth, Texas, 76107; 817-735-2405 or at < jlicciar@hsc.unt.edu>.

Somatic Dysfunction in Low Back Pain



by Brooks M. Blake, D.O.

Introduction

Almost ninety percent of people will experience low back pain in their life. While ninety percent of those will be classified as idiopathic, somatic dysfunction is present in every patient and will resolve with conservative management and osteopathic manipulation. Thus, differential diagnosis of low back pain should include somatic dysfunction as well as anatomic, metabolic, and traumatic causes.

Somatic Dysfunction

The key to understanding somatic dysfunction of the low back is the functional spinal unit (FSU) and its motion. The functional spinal unit (FSU) is a motion segment that consists of two adjacent vertherae, the ligaments, muscles and tendons that connect them, the articular surfaces, vertebral processes and facets that guide their motion. The FSU exhibits the biomechanical motions and behaviors of the entire spine. The characteristics of the FSU are dependent upon its structure and attachments.¹

In a normal spine, the structures of the low back act together to produce a system that behaves much like a flexible rod, with the factes of the vertebrae guiding their motion. The vertebral facets determine which way the FSU can move. In the lumbar spine, the superior facets face posteriomedially while the opposing inferior facets face anteriolaterally. Thus the motion permitted includes significant forward and backward bending, some degree of sidebending, and limited rotation.¹

The normal disk serves to absorb shock. With vertical force, the disk compresses in the vertical axis causing the annulus to bulge outward. With eccentric movement (flexion, extension, or sidebending), the compression tends to one side and decompression to the opposite side.

Abnormalities of the structures involved can thus produce abnormalities of function. The contour of the articulating surfaces and the condition of the synovial joints are important to normal motion. Certain disease states like arthritis may alter the smoothness of the normal surface and function of the synovium, producing restrictions. Ligamentous laxity may allow excess strain on the structures, while taut ligaments or locked facets will cause the FSU to behave like a rigid rod, rather than show flexibility.¹

If the wall of annulus is deficient, a protrusion or rupture can occur. Normal wear and tear of the aging process increases the risk of derangement of the FSU. Finally, fractures, ostearthritic changes, as well as neurofibromas or tumors can result in deranged motion or protrusion into the canal, compressing the thecal sac.

Fryette's Principles

In evaluating the nature of the somatic dysfunction in the context of the FSU, this author has found that the three general principles outlined by Fryette are particularly useful. These are:

Principle I: When the thoracic and lumbar spine is in a neutral position, the coupled motions of sidebending and rotation for a group of vertebrae are such that sidebending and rotation occur in opposite directions (with rotation occurring toward the convexity).

"A thorough physical exam should include a neurologic exam to rule out the presence of nerve damage and a ten step postural screening exam to detect signs of somatic dysfunction."

Principle II: When the thoracic and lumbar spine is sufficiently forward or backward bent, the coupled motions of sidebending and rotation in a single vertebral unit occur in the same direction.

Principle III: Initiating motion of a vertebral segment in any plane of motion will modify the movement of that segment in other planes of motion.²

According to the first law, when sidebending or rotation are attempted the spine will first sidebend and then rotate to the opposite side. Somatic dysfunction of the neutral type will exhibit sidebending preference to one side and rotational preference to the opposite side. This preference for motion can be expressed as the orderly adaptation of the vertebral bodies, connected by ligaments and behaving as a unit. As force is applied, it will first begin to sidebend but since the ligaments are taut and non-elastic, rotation occurs rather than having the ligaments buckle under the strain.³

Fryette's second principle of spinal motion illustrates the mechanics of the FSU in a non-neutral position. When the lumbar spine is forward bent (or extremely backward bent) with the vertebrae out of their normal anatomic position and sidebending or rotation is introduced, the second law comes into play. One or two spinal segments will first rotate to the rotated or sidebent side of the lumbar spine and then will sidebend to the same side. Therefore, non-neutral somatic dysfunction will exhibit motion preferences in sidebending and rotation to the same side. This motion preference can be seen as a reaction to a force applied to the vertebral bodies when they are in a position that renders them rigid. When the lumbar spine is forwardbent the ligamentous structures hold the segments taut. When backward bent the facets approximate and lock the spine. Either way, the result is a rigid rod-like structure that must exhibit torque in one segment in order to allow for enough "slack" for the remaining segments to rotate and sidebend in opposite directions.3

Although the sacrum is five fused vertebrae, it is part of the spine; it has the same embryological origins as the rest of the spine above it. As a result, it attempts to move in response to motion of the spine. The motions of the sacrum are an attempt to sidebend and rotate like its spinal segmental brethren. The composite motion that results occurs along and around an oblique axis. (For documentation, the axis is named for the superior portion.) The direction of sidebending of the lumbar spine determines the oblique axis to the same side. So a left sidebent lumbar spine will establish a left oblique axis.⁴

While the neutrality of the lumbar spine has no effect on the sacral oblique axis, it does affect the rotation of the sacrum about its axis. Neutral lumbar mechanics will induce rotation of the sacral base in a direction opposite that of the lumbar rotation. When the lumbar spine is sidebent right and rotated left, a right oblique axis will be engaged. The left sacral base will then move anteriorly, resulting in a right rotation. Non-neutral lumbar mechanics will also cause the sacral base to rotate in a direction opposite the lumbar rotation, provided that the forward bending is enough to alter the physiology of the pelvis. With sufficient forward bending the sacrum will move in a non-neutral fashion, with the sacral base on the side opposite of the superior pole of that axis moving posteriorly. In this instance the sacrotuberous ligaments hold the sacrum tight while the ilia continue to rotate forward, destabilizing the normal iliosacral relationship. When this destabilizing force occurs, the sacrum may respond to the "slack" provided by the anterior and posterior longitudinal ligaments in their non-neutral mechanics.⁴

When L5 and the sacrum are simultaneously in a non-neutral position a tremendous shearing force is created. If this situation is present, it can mimic the pain of a ruptured disk.⁴

Diagnosis

As with most conditions, an adequate history is the key to a diagnosis of somatic dysfunction. This cannot be understated. Eliciting a thorough history of events that may not seem important to the patient is essential, since patients may not see a connection between their developmental histories or prior traumas and their presenting complaint. A thorough physical exam should include a neurologic exam to rule out the presence of nerve damage and a ten step postural screening exam to detect signs of somatic dysfunction.

Radiological exams may be helpful in recurrent episodic low back pain to determine physiologic short leg or unlevel sacral base. If nerve impingement is suspected then appropriate diagnostic studies should be ordered.

Treatment

When evidence of somatic dysfunction is identified, osteopathic manipulative treatment should be initiated. Even if the cause of the pain is due to some other process, OMT can be of benefit in controlling the pain and dysfunction associated with it.

Somatic dysfunction, as discussed above, is primarily ligamentous and an imbalance in the tension of the ligamentous structures is present. One or more ligaments are weakened and have been stretched beyond physiological limits. Since other ligaments in the FSU have not been damaged an imbalance develops, causing the vertebrae to assume a position that is closer to the one in which the lesion originally occurred. Treatment should take this into account and be done by exaggerating the lesion and carrying it to a point of balance. This point of balance is where the tension in the strained side is equal to or slightly greater than the tension present in the non-lesioned side. When the ligamentous tension is balanced correctly, the use of muscular and/or respiratory cooperation to overcome the resistance of the body's defense mechanism and release of the lesion can occur.⁵

A stepwise approach to treatment should begin with soft tissue manipulation and fascial/myofascial release. This may be followed by trigger point inhibition and/or strain counterstrain. Indirect inherent force, respiratory cooperation or force should precede the direct approaches. If one chooses to use high velocity low amplitude (HVLA), it should be preceded and followed by soft tissue treatment, as all the former treatment modalities mentioned treat the muscles, tendons, ligaments and fascia which hold the memories of trauma and somatic dysfunction. Direct muscle energy should precede HVLA because the sudden lengthening of muscles and ligaments may cause a tearing of fibers and thus induce soft tissue injury. Use of muscle energy may help the patient to relax, prior to thrusting, resulting in more effective HVLA with less strain for both the doctor and the patient.

Referred pain from myofascial trigger points can also produce lumbosacral pain. Quadratus lumborum, piriformis, iliopsoas, rotatores, multifidi, and gluteus muscle tender points can have referred pain patterns in the low back and lower extremities. When treating trigger points, it is advisable to treat the anterior companion trigger points as well.³ Osteopathic manipulative treatment tends to be most effective when combined with other modalities in an integrated approach, along with mediations, exercise, and behavior modification.

While nonsteroidal anti-inflammatory drugs (NSAIDs) may help in controlling pain and inflammation, they may interfere with the healing process as prostaglandins are an integral part of the body's repair mechanism. Acetaminophen may be used in place of NSAIDs. Low doses of both acetaminophen and ibuprofen used concurrently seem to have a synergistic effect on pain control and should not interfere with the healing mechanism. Tricyclic antidepressants and muscle relaxants may aid in calming down significant acute and chronic muscle spasms to facilitate treatment and allow for restorative sleep. It may be advisable to not use steroids and narcotic analgesics unless clearly necessary due to their significant potential side effects.

Ice and heat may be used alone or in conjunction with pharmacological and manipulative therapies along with relative rest and early gradual return to activity. Aerobic exercise and daily stretching will also aid in the return of normal function as well as help prevent recurrence.

Physical therapy can be another appropriate modality for treating low back pain. Many patients developed problems because of deconditioning and inappropriate body mechanisms. With physical therapy, the patient can learn correct exercise and stretching techniques while strengthening muscles and improving range of motion.

Weight loss should be encouraged in obese patients. All patients should be educated in proper biomechanics and workplace ergonomics. Psychological and spintual dysfunction should also be addressed since they often play a role in the genesis and progression of the patient's symptoms.

Conclusion

Somatic dysfunction is a universal phenomenon in virtually all forms of back pain, and may be the primary cause of pain in patients with idiopathic low back pain. This is the most easily diagnosed and treated by the osteopathic physician.

References

- Ward RC, ed. Foundations for Osteopathic Medicine. Baltimore: Williams & Wilkins, 1997
- 2. Glossary of Osteopathic Terminology
- 3. Kuehera & Kuchera Osteopathic Principles in Practice. Columbus: Greyden Press, 1994
- Pearson JK. Physiologic Motion of the Spine an Osteopathic approach. KCOM, 1981
- 5. Lippineot HA, A.A.O. Yearbook, 1949

Brooks M. Blake, D.O. graduated from the University of North Texas Health Science Center/Texas College of Osteopathic Medicine in 1999 and is now a senior Neuromusculoskeletal Medicine/Osteopathic Manipulative Medicine resident at Osteopathic Medical Center of Texas and Texas College of Osteopathic Medicine in Fort Worth, Texas.

The OxyContin Controversy

by Michael D. Baldovsky, BA, MSIII, Gary W. Binkley, BS, MSIII, and Scott Stoll, D.O., Ph.D.

Everyone is aware of the media frenzy over prescribing OxyContin and the dilemma of addiction vs. undertreating severe pain. OxyContin is a sustained release form of oxycodone, a schedule II controlled substance. It is an opioid agonist of similar potency to morphine and has been shown to be an excellent drug for malignant and nonmalignant pain. However, it has also proved to be very popular with the underground drug user network? Abusers crush the tablets and ingest the drug intravenously or intranasally, which results in extreme euphoria.¹ There have been many recent accounts in the media of abuse, thefts and other crimes related to OxyContin. This places physicians in a precarious position. With the increased media attention, physicians are reluctant to use OxyContin for fear of DEA prosecution for overtreating pain. On the other hand, lawsuits are also emerging in cases where patients have not been given adequate pain control.² With this in mind, what is the real risk of prescribing OxyContin and how does a physician decide whether or not to prescribe it?

First, this discussion should exclude terminal patients, who should receive maximum pain relief without any concern of abuse potential. Ronald Melzack, Ph.D., research director of the Pain Clinic at the Montreal General Hospital, argues that morphine taken to control pain is not addictive. Addiction only develops in the small percentage of morphine users who take the drug for its euphoric and tension relieving effects, not for addiction. They require larger and larger doses to achieve the same high. Patients that take morphine solely for pain control may develop some tolerance initially, but their required dose usually rises gradually and then stabilizes. If a larger dose is required, it is usually due to disease progression. If the opioid sensitive pain resolves, opioids can usually be stopped without patients becoming addicts. He goes on to say that the people who develop tolerance to and dependence on narcotics are usually those who already have a history of substance abuse or psychological disturbances.⁶

Dr. Melzack also makes note of other studies demonstrating narcotic use without addiction such as a study done by Jane B. Porter and Hershel Jick of the Boston University Medical Center. They followed 11,882 patients who were given narcotics for pain during hospitalization. None of the patients had a history of previous drug dependence. They found that only four of the patients abused drugs later and only one case was considered major abuse. In another study by Samuel W. Perry of New York Hospital and George Heidrich of the University of Wisconsin at Madison, 10,000 hospitalized bum patients were given injections of narcotics for weeks to months. These patients were undergoing extremely painful debridement of burned skin. Not one case of addiction could be attributed to the narcotics given during the hospital stay. Of the 22 patients found to have abused drugs after they were discharged, all of them had a history of drug abuse.⁶

It has been argued that the medical availability of opioids increases street addiction. However, there has never been any strong evidence that this is true.³ A recent study in the Journal of the American Medical Association utilized the Drug Abuse Warning Network (DAWN), a division of the Department of Health and Human Services, which reports the number of episodes of drug abuse that result in admission to an emergency department (ED). They looked at ED admissions at approximately 500 U.S. hospitals from 1990 to 1996. The researchers found that opioid analgesics accounted for 3.8% of total episodes of abuse in 1996. The number of episodes increased 6.6% from 1990 to 3.8% in 1996. The researchers also looked at the U.S. Drug Enforcement Administration's Automation of Reports and Consolidated Orders System (ARCOS) for the same time period. ARCOS



monitors the lawful distribution of schedule I, II, and III controlled substances from manufacturers to the retail level. ARCOS showed an increase in the medical use of oxycodone of 22.76% from 1990 to 1996. The number of episodes of abuse involving oxycodone specifically actually decreased from 1990 to 1996 despite an increase in its medical use. The percentage of abuse episodes involving oxycodone was less than 1% of all total abuse episodes. This study suggests that an increase in medical use of OxyContin has not increased its abuse.⁴

We examined the data from DAWN for the year 2000, which reported 601.776 drug related ED episodes. Oxycodone accounted for only 2% of all episodes of abuse in 2000. Episodes involving oxycodone increased 68% from 1999 to 2000 and increased 108% from 1998 to 2000. Despite this increase, Oxycodone still ranks 14th on the list of drugs of abuse, behind drugs such as diazepam, hydrocodone, actaminophen, and ibuprofen. The study also points out that "A trial of OxyContin should be started only when other analgesics such as NSAID's, combination drugs, antidepressants and anticonvulsants have failed as well as psychological approaches..."

an increase in episodes involving oxycodone cannot be attributed to OxyContin specifically because of the inconsistency involved in reporting drug abuses. It is difficult to discern whether the drug ingested by a patient was OxyContin, Percocet, or Percodan.⁷

Because of the increased concern over abuse, Purdue, the makers of OxyContin, have been working to reduce abuse and diversion of the medication. They are currently working with the Food and Drug Administration to develop new formulations of OxyContin that would be resistant to abuse but would still provide effective pain relief. They are also distribuing tamper-resistant prescription pads to physicians in endemic areas. In July 2001, they changed the physician prescribing information and package insert of OxyContin to read:

"OxyContin is an opioid agonist and a schedule II controlled substance with an abuse liability similar to morphine.

Oxycodone can be abused in a manner similar to other opioids, legal or illicit. This should be considered when prescribing or dispensing OxyContin in situations where the physician or pharmacist is concerned about an increased misuse, abuse, or diversion.

OxyContin tablets are a controlledrelease oral formulation of oxycodone hydrochloride indicated for the management of moderate to severe pain when a continuous, around-the-clock analgesic is needed for an extended period of time.

OxyContin Tablets are not intended for use as a pm analgesic. OxyContin 80 mg and 160 mg Tablets ARE FOR USE IN OPIOID TOLERANT PATIENTS ONLY. These tablet strengths may cause fatal respiratory depression when adminiistered to patients not previously exposed to opioids. OxyContin TABLETS ARE TO BE SWALLOWED WHOLE AND ARE NOT TO BE BROKEN, CHEWED, OR CRUSHED. TAKING BROKEN, CHEWED, OR CRUSHED OXyContin TABLETS LEADS TO RAPID RELEASE AND ABSORPTION OF A POTENTIALLY FATAL DOSE OF OXYCODONE."

Physicians also have a large responsibility for decreasing abuse of OxyContin. Only physicians who hold registration from the Drug Enforcement Agency may prescribe controlled substances. In Texas, OxyContin and other schedule II drugs can only be prescribed on triplicate prescriptions that are obtained from the DEA.3 A trial of OxyContin should be started only when other analgesics such as NSAID's, combination drugs, antidepressants and anticonvulsants have failed as well as psychological approaches, injections, devices, and operations.5 OxyContin should be used for constant pain relief and never used prn. Physicians need to carefully screen patients before prescribing them any opioids. Any patient with a history of drug or alcohol abuse or psychological problems needs to be given a different drug or monitored extremely closely. Physicians should also require the patient to sign a contract before they receive the prescription. Baumrucker² suggests that this contract include the following elements:

- Purchase medications at one pharmacy only
- Obtain opioid prescriptions from only one physician
- 3. Submit to random pill counts
- Provide urine for random drug screens
 Keep appointments on a regular schedule
- 6. No refills for lost or stolen medica-

tions without a valid police report

 Any other requirements a physician thinks are necessary

If a patient violates this contract, they may be discharged. It is also very important that a physician keep accurate and complete medical records that are kept current and accessible.³ With all of these safeguards in place, patients with chronic pain will not be deprived of pain relief and will be given the chance to live a more productive life.

References

- Alford R: The Associated Press. Critics seek new OxyContin curbs. Wednesday, March 21,2001.
- Baumrucker SJ: OxyContin, the media, and law enforcement. Am J Hosp & Pall Care 2001; 18:154-156.
- Fujimoto D: Regulatory issues in pain management. Clin in Geriatr Med 2001; 17:537-551.
- Joranson DE, Ryan KM, Gilson AM, et al: Trends in medical use and abuse of opioid analgesics. JAMA 2000; 283:1710-1714.
- McQuay H: Opioids in chronic non-malignant pain. BMJ 2001; 322:1134-1135.
- Melzack R: The tragedy of needless pain. Sci Am 1990; 262:27-33.
- Substance Abuse and Mental Health Administration, Office of Applied Studies. Ven-End 2000 Emergency Department Data from the Drug Abuse Warning Network, DAWN Series D-1 8, DHHS Publication No. (SMA) 01-3532, Rockville, MD, 2001.

Michael D. Baldovsky is a third year medical student at the University of North Texas Health Science Center/Texas College of Osteopathic Medicine, Fort Worth, Texas.

Gary W. Binkley is also a third year medical student at the University of North Texas Health Science Center/Texas College of Osteopathic Medicine.

Scott Stoll, D.O., Ph.D., is Chairman/Associate Professor of the Department of OMM at the University of North Texas Health Science Center.

BA, BS, MA, MS, MBA, JD, PhD, DO,



Don't let your children's pursuit of higher learning leave those last three letters behind your name. Let us help you develop an investment plan to meet the rising costs of a college education.

Contact us today for more information or to schedule a consultation.

DEAN, JACOBSON FINANCIAL SERVICES, LLC

Don A. "Jake" Jacobson, CLU, ChFC William H. "Country" Dean, CFP Jeffrey J. Schmeltekopf, CLU, ChFC, CFP

3112 West 4th Street Fort Worth, TX 76107 817-335-3214 972-445-5533

Securities offered through Linsco/Private Ledger Member NASD/SIPC

Protocols

by Taralynn R. Mackay, RN, JD

What are Protocols?

Protocols are written authorization by the supervising physician for a physician assistant [PA] or an advanced practice nurse [APN] to begin medical acts in regards to patient care.¹

Do I need to use Protocols?

If you supervise a PA – yes; if you collaborate with an APN – maybe. Protocols are used to provide authorization (Doctor's orders) for medical acts. The PA scope of practice states that a PA must be delegated authority to provide medical services by the PA's supervising physician.³ However, an APN does not require delegated authority to perform nursing acts because those acts fall within the nurse's scope of practice.³ An APN would need physician authorization to perform medical acts, such as prescribing.⁴

What should be included in the Protocols?

Protocols do not have to list detailed steps that a PA or APN has to take when performing medical acts specific to a disease, symptom or condition. Protocols can take into account the education, training, and experience of the PA or APN.⁵ Some practitioners develop their own protocols, some use protocol books, and others turn to professional associations for assistance in developing protocols.

In order to comply with the law, the following conditions must be met:

- · the protocols are agreed upon by both the Dr. and the PA/APN,
- the Dr. and the PA/APN must initially sign that the protocols have been agreed upon,
- · the protocols must be reviewed at least every year,
- the Dr. and PA/APN must re-sign on the signature site/sheet that the annual review of the protocols has taken place, and
- · the protocols must be kept where the PA/APN is practicing.6

Most practitioners either have a signature site/sheet located at the end of each protocol or they have an overall signature site/sheet located at the front or back of the protocol notebook or book. Any supervising physician/PA/APN utilizing the protocols must comply with the above requirements.

What about prescribing?

The carrying out or signing of a prescription drug orders by a PA or APN is a medical act and physician authorization is required. The physician authorization may take the form of a verbal order, a written order, or protocols. Protocols for prescribing must meet the basic requirements discussed above in regards to reviewing and signing the protocols. The prescribing protocols must also:

- contain a list of the types or categories of dangerous drugs available for prescription
 - including limitations on the number of dosage units,
 - the number of refills permitted,

- instructions to be given to the patient regarding follow-up, OR

 contain a list of the types or categories of dangerous drugs that may not be prescribed.⁷

Note that protocols may state types or categories of drugs that may be prescribed rather that just list the specific drugs. Remember that unless a PA/APN is offering obstetrical services⁴, a PA/APN is not allowed to prescribe controlled (scheduled) medications. This means that every time a controlled drug is prescribed to a patient, the physician either gives the PA/APN a written or a verbal order. Protocols should not contain authorization for controlled substances.

The rules and other information can be found at the following websites: Texas Medical Board and Physician Assistant Board at <www.tsbme.state.tx.us>; Texas Nursing Board at <www.tsbme.state.tx.us>.

References

- 1. 22 Texas Administrative Code 193.2(9)
- 2. 22 Texas Administrative Code 185.11
- 3. 22 Texas Administrative Code 221.13(d)
- 4. 22 Texas Administrative Code 221.1(3) "...The advanced practice nurse acts independently and/or in collaboration with other health care professionals in the delivery of health care services."
- 5. 22 Texas Administrative Code 193.2(9)
- 6. 22 Texas Administrative Code 193.2(9)
- 7. 22 Texas Administrative Code 193.2(9)
- 8. 22 Texas Administrative Code (193.6ft) "...a physician assistant offering obstetrical services and certified by the board as specializing in obstetrics or an advanced practice nurse recognized by the Texas State Board of Nurse Examiners as a nurse midwife the act or acts of administering or providing controlled substances...during the intra-partum and immediate post-partum care..." Note that there are more requirements within these rules for the delegation of authority to provide controlled substances.

Taralyan R. Mackay, RN, JD, is a partner in the Austin law firm of McDonald, Mackay & Weitz, LLP where her practice focus is administrative/regulatory law, health care law, and professional licensing issues. She is Board Certified in Administrative Law by the Texas Board of Legal Specialization. Ms. Mackay is a former Assistant General Counsel and Staff Attorney for the Texas State Board of Medical Examiners and the Texas State Board of Physician Assistant Examiners. She received her BSN with Honors from the University of Texas Medical Branch and her Doctor of Jurisprudence from the University of Texas School of Law. The athletic preseason physical is a necessary evil for all primary care physicians. All junior and senior high schools in the State of Texas require history and physicals prior to athletic competition. We perform so many of these that sometimes it seems that we can do them "in our sleep." However, there is a new way of performing these evaluations that deserves the attention of every physician, physician assistant and nurse practitioner in the State of Texas. In the past, there have been as many history and physical forms in use as there are schools in Texas. There was no requirement by the University Interscholastic League (UIL) that any specific form be used exclusively. The sudden death of several high school athletes in the past six months prompted the UIL to form a Sports Medicine Advisory Committee to the UIL to address this issue. A new and improved history and physical form was the result.

> There has been an excellent form in existence since 1992. That year a monograph (a joint effort from the American Academy of Family Physicians, the American Academy of Pediatrics, the American Medical Society for Sports Medicine, the American Osteopathic Academy of Sports Medicine and the American Orthopedic Society for Sports Medicine) described what was believed to be the perfect history and physical form. In 1997 that monograph was updated and improved once again. This form has been the recommended form by the UIL for the past two years. The UIL Sports Medicine Advisory Committee made some additions to this form that we believe will improve the detection of life-threatening medical conditions if physicians will pay close attention to certain questions in the

medical history and follow-up with a thorough examination of the cardiovascular and neurologic system.

Important cardiac questions from the original form were retained, including "Have you ever passed out during exercise?" and "Have you ever been dizzy during or after exercise?" These two questions are important in thinking about the possibility of hypertrophic cardiomyopathy, which is the number one cause of sudden death in young people under the age of 25 during exercise. The question "Have you ever been told you have a heart murmur?" is also important in detecting valvular disease. The important question, "Has any family member or relative died of heart problems or sudden unexpected death before the age of 50?" remains, but a follow-up question "Have you had a severe viral infection (i.e., myocarditis or mononucleosis) within the last month?" and "Has a physician ever denied your participation in sports for any heart problems?" are added. These last questions will aid the physician in uncovering any potential cardiac problems that might lead to cardiac morbidity or mortality.

Preparticipation Physical Evaluation of Athletes – New and Improved

by Alan R. Stockard, D.O., FAOASM

The old section on head injury, while somewhat adequate, was expanded. After the question "Have you ever been knocked out, become unconscious, or lost your memory?" the following questions were asked: "If yes, how many times?", "When was the last concussion?"; and "How severe was each one? (explain below)." The final addition to the old form comes under the respiratory section in which the athlete was originally asked questions about asthma, but the committee decided to add "Have you ever gotten unexpectedly short of breath with exercise?" This question could help detect other underlying respiratory or cardiae problems.

The physical exam itself was felt to be adequate by the UIL Medical Advisory Committee, however additional language was added in examination of the cardiovascular system of each athlete. Under auscultation of the heart the physician is asked to auscultate the heart in the supine and standing positions. Lower extremity pulses are also requested in order to uncover possible coarctation of the aorta. Auscultation of the heart in the supine and standing positions should help the physician determine discrepancies, which could suggest hypertrophic cardiomyopathy or other cardiac conditions. Cardiology consultation and/or ECG/Echocardiogram would follow.

In summary, the UIL Medical Advisory Committee felt that these changes would better ensure that athletes receive a thorough and comprehensive preparticipation physical evaluation prior to athletic competition. However, physicians must be conscientious and utilize this new form as a way to better screen athletes. The days of the "heart, lung, turn your head, cough, you're okay to play" exam are over. It is every physician's responsibility to make sure that these physical exams are performed thoroughly and completely. The committee also strongly recommended that mass athletic physicals in the locker room situation be discouraged due to concerns about noise and the possibility of the exams being hurried. These conditions can lead to missed diagnoses. I encourage each physician who performs these physicals to keep a supply of the new preparticipation physical evaluation forms in his/her office. The forms can be obtained by contacting the University Interscholastic League, Box 8028-University Station, Austin, Texas 78713-8028; calling 512-471-5883; or by downloading this form from the UIL Web site at <www.uil.utexas.edu>. Click on Athletics, then click Athletic Forms to download and print, then click on miscellaneous forms "Preparticipation Physical Evaluation Medical History and Physical Examination".

Dr. Stockard is Division Chief of Primary Care Sports Medicine, Department of Family Medicine at the University of North Texas Health Science Center at Fort Worth.



Physicians can now train staff to become x-ray equipment operators with this convenient educational tool. The OTJ program allows physicians to effectively train individuals to perform routine diagnostic X-Ray procedures in their office. The two-binder program includes a physician's training guide and a student workbook. All tests, answer keys, certificates and forms are included.

PRICING [includes tax, shipping and handling]: \$298.38

<u>3 E-Z Ways to Order</u>

1 Mail: Mail check or credit card information with order for to: TMA Bookstore, 401 West 15th Street Austin, Texas 78701-1680

Phone: Call (800) 880-1300, Ext. 1456 to order with VISA, MasterCard or American Express

3 Fax: Fax order form to [512] 370-1635 to order with VISA, MasterCard, or American Express



	the product of the second second second
Phone: ()	and the second states in the
Address:	
Fax: ()	and a second second of the
City:	TX Zip:
Payment O Check enclosed O VISA O MC O AMEX	
Credit Card Number	
	and a second second second
Exp. Date:	
Exp. Date:	

Program

The Physician's Guide

& Training Program for

- Ka

In Memoriam

Keith L. Hull, Sr., D.O.

Dr. Keith L. Hull, Sr., of Tyler passed away on February 13, 2002. He was 85. Memorial services were held February 16 at Pollard United Methodist Church in Tyler, with interment in Durham Cemetery, Durham, Illinois.

Dr. Hull was a general surgeon who had retired after more than 50 years of active practice. He was a 1940 graduate of the Krksville College of Osteopathic Medicine. He was a Fellow of the American College of Osteopathic Surgeons and a life member of the Texas Osteopathic Medical Association. Dr. Hull was also a member of the Pollard United Methodist Church in Tyler. In addition, Dr. Hull had been a member of the Masonic Lodge for over 50 years and was a 32nd degree Mason. He was a member of the Sharon shirine Temple in Tyler.

Survivors include his wife, Ann Walker Hull; sons, Keith Hull, Jr., of Raleigh, North Carolina, and Kim Hull of Green Bay, Wisconsin; grandchildren, John David, James Robert and Mary Jane Hull of Raleigh, North Carolina, Rena Maree, Kami Lee and Megan Ann Hull of Milwaukee, Wisconsin; stepson, James Duglas Walker; and stepdaughter, Laura Ann Armstrong.

John C. Phillips, D.O.

Dr. John C. Phillips of Amarillo passed away on February 13, 2002. He was 54. Services were held February 16 at First United Methodist Church in Perryton, with burial in Ochiltree Cemetery.

A certified family practitioner, Dr. Phillips had practiced in Perryton from 1980 to 1988. He had worked at the VA Hospital in Amarillo for the past year. He was a 1979 graduate of Texas College of Osteopathic Medicine, Fort Worth.

Survivors include his wife, Tanis; two daughters, Misti Piering of Richardson and Tana Neas of Perryton; a brother, Phil Phillips of Amarillo; and a sister, Anne Naiman of Canyon Lake. The family suggests memorials be to a favorite charity.

Mary Edwina Larmoyeux Luibel

Mary Edwina Larmoyeux Luibel, a retired registered nurse, passed away March 3, 2002, in Fort Worth. She was 89, Services were held March 8 at St. Mary of the Assumption Catholic Church, with burial in Mount Olivet Cemetery. A reception in her memory was held following the funeral at The Jennings Pavilion, on the campus of Osteopathic Medical Center of Texas.

Since her marriage to Dr. George Luibel in 1944, she worked in support of his profession, holding every elected office in auxiliaries of district, state and national osteopathic associations and served as president of the hospital guild of the Osteopathic Medical Center of Texas. She served as president of the Auxiliary to the American Osteopathic Association in 1973-74. Additionally, Mrs. Luibel was a life member and past president of the Auxiliary to the Texas Osteopathic Medical Association.

A member for over half a century of St. Mary of the Assumption Catholic Church, she was a eucharistic minister and a member of its finance committee, the National Council of Catholic Women, the auxiliary of the Discalced Carmelite Nuns and the Theresians. The Luibels have been honored with papal investiture into The Equisitian Order of the Holy Sepulchre of Jerusalem.

Survivors include her husband of 57 years, George Joseph Luibel, D.O.; sisters, Julia Butler of Chandler, Ariz., Mercedes Pennington of Jacksonville, Fla., and Catherine Millan of Jacksonville, Fla.; and nieces and nephews. Should friends desire, memorials may be given to The Osteopathic Health Foundation, Box 9880, Fort Worth, Texas 76147.

KCOM Establishes Scholarship In Honor of the Late Jerry Alexander, D.O.

The Kirksville College of Osteopathic Medicine has established "The Jerry M. Alexander, D.O., Endowed Financial Award" to honor the memory of Dr. Alexander of Wichita Falls, who died last year. The endowed fund will provide financial support for KCOM students from Texas, and will be an annual award.

Dr. Alexander was the son of the late Ted C. Alexander, Sr., D.O. (who was a 1943 KCOM graduate) and Betty Alexander of Wichita Falls. His brother, Ted C. Alexander, Jr., D.O., of Wichita Falls is a 1971 KCOM graduate. Brandy Alexander, daughter of Dr. Jerry Alexander and Charlene Alexander, is currently a student at KCOM.

A 1973 graduate of KCOM, Dr. Alexander practiced family and sports medicine in Wichita Falls until the time of his death. He served for 25 years as the team physician for the Wichita Falls Coyotes, and as the medical director for the Hotter 'N Hell Hundred bicycle race. In 1992, he was named to the Oil Bowl Football Hall of Fame.

Those wishing to make contributions to the award should send donations to the following:

Jerry Alexander, D.O., Endowed Financial Award Kirksville College of Osteopathic Medicine 800 W. Jefferson Street Kirksville, Missouri 63501

TOMA's 103rd Annual Convention & Scientific Seminar • June 12 – 16, 2002 REGISTRATION

PRINT CLEARLY or TYPE				
Name				
First Name for Name Badge (if differe	nt from above)		1	in the second at mission
Mailing Address	all the second	-		
City	S	tate		Zip
Phone ()	FAX ()			_E-mail
D.O. College	Year Graduated AOA#			
Specialty	necialty			TOMA District
Spouse or Guest (if Name Badge is req	juested)	11/1	-	
Please check here if you have a disab	oility, require a special diet	or accom	modations.	You will be contacted to discuss your needs.
REGIST	RATION FEES			the surface of the second
	EARLY Registration Re	egistratio	on	PAYMENT SUMMARY
	(Postmarked by 5/20) (Post	marked a	fter 5/20)	Convention Registration Fee(s) \$
TOMA Members*	\$450**	\$550**	\$	Special Events \$
 1st or 2nd Year in Practice** 	\$275	\$375	\$	Additional Tickets/Packages \$
 Retired/Life Members** 	\$200	\$300	3	TOTAL \$
• Guests**	\$200	\$300	5	and a standard and a standard and
Non-Members**	\$600	\$700	\$\$	FORM OF PAYMENT
Other Healthcare Professionals**	\$300	\$400	»	Check in the amount of \$
(such as P.A.'s, Nurses)	e0.	\$0	c	OR
Students/Interns/Kesidents***	ociations	\$ 0	0	Credit Card in the amount of \$
** Registration includes one ticket to all meal func-	tions and one ticket to President's	Banquet.	v	□ Visa □ MasterCard □ AmExpress
*** Registration does NOT include tickets to any m	eal function or special activities li	sted below.		Card Number
REGISTRATION FEES SUBTOTAL	See Meal Ticket Fackage below		\$	
				Evaluation Data
SPECL	AL EVENTS			Expiration Date
Family Day*\$20	x # tickets		\$	Please TYPE or PRINT name as it appear
YESI/We will ride the TOMA Shut	tle. # of riders in your group_			on the card:
NO _I/We will NOT ride the TOMA	shuttle.			
* fickets are limited to 175 people on a First-CC	nie Filst-Selved Oasis.			
ATOMA Golf Tournament \$75	x # tickets		s	Authorized Signature
Name: Player #1	Handicap	_		
Player #2	Handicap	-		the second s
NO I/We will NOT ride the TOMA	# of fiders in your group	-		MAIL COMPLETED FORM
YES I want to sponsor a Tee Sign w	with my name for \$100 (per sig	zn)	\$	WITH CHECK PAVABLE TO
Sustainers Party (Open to Sustaining M	Members - Adults Only)	3		TOMA
Number of tickets (circle one) 1 2			N/C	1415 Lavaca Street Austin, TX 78701
YESI/We will ride the TOMA bus.	# of riders			OR
NOI/We will NOT ride the TOMA bus.			ONLY if paying by credit card	
ADDITIONAL TICKET	SMEAL TICKET D	ACEL	•	FAX: 512-708-1415
ADDITIONAL TICKET	SIMEAL HUKET P	ACKAG	JE	the set of the planet product of the
Convention Meal Package* \$140 per person x # packages			\$	and the second second second second second second
TOMA President's Panquet	in.; Keynote Luncheon; AOA	Luncheon	e	FOR OFFICE USE ONLY
TOWA President's banquet \$75	x # uckets		2	Date Received

ATOMA President's Installation Breakfast \$20 x minimum content of the second on-site A ticket must be presented for each meal. Meal tickets CAN NOT be purchased separately or at the meal function. ADDITIONAL TICKETPACKAGES SUBTOTAL \$

SUBTOTAL \$

Amount \$_

Wednesday, June 12

4:00pm - 7:00pm	Registration Open
5:00pm - 7:00pm	Exhibits Open
5:30pm - 6:30pm	Reception with Exhibitors

Thursday, June 13

7:00am - 5:00pm	Registration Open
7:30am - 8:30am	Breakfast with Exhibitors
8:30am - 10:30am	Men's Preventive Health
	Ronald Martin, D.O.
	Sponsored by Bayer
10:30am - 11:00am	Pharmaceutical Update
11:00am - Noon	Rheumatology Arthritis: "Nuts & Bolts"
	Scott Stein, D.O.
	Sponsored by Wyeth
Noon - 1:30pm	AOA Luncheon
1:30pm - 2:30pm	"Who's a Bully And What
	Does It Matter To You"
	Deborah Blackwell, D.O.
2:30pm - 3:30pm	Systems, Quality Improvement
	and Chronic Disease Care
	David R. Wood, D.O.
	Sponsored by Texas Medical Foundation
3:30pm - 4:00pm	Pharmaceutical Update
4:00pm - 5:00pm	Dermatological Procedures for
	Skin Care Patients
	Daniel Ladd, D.O.
(00	Sponsored by Dermik Laboratories
0:00pm - 10:00pm	Sustainer's Party

Friday, June 14

7:00am – 1:00pm	Registration Open
7:30am - 8:30am	Breakfast with Exhibitors
8:00am - 9:00am	*Texas State Board of
	Medical Examiners Update
0.00	David Garza, D.O.
9:00am - 10:00am	Pediatrics in the Family Care Practice
10.00	Jim Marshall, D.O.
10:00am - 10:30am	Pharmaceutical Update
10:30am – 12:30pm	4 Breakout Workshops
	(Workshops 1, 2, & 3 repeat on
	Saturday afternoon)
	Workshop 1 Hand Hand

Handheld PC's Daniel Saylak, D.O.

PRELIMINARY PROGRAM SCHEDULE - 26.5 Category 1-A CME Hours Anticipated -

Friday, 10:30 am - 12:30pm continued

Workshop 2 - OMT Anthony Wright, D.O. Workshop 3 - HIPPA Janet Horan, J.D. Sponsored by the American Osteopathic Association Workshop 4 - Knee Injections Alan R. Stockard, D.O. Sponsored by Wyeth-Ayerst Family Fun Day and Golf Tournament OPTIONAL CME LECTURE End of Life Care Karen Nichols, D.O. Sponsored by the American Osteopathic Association

Saturday, June 15

1:30pm - 3:30pm

1:00pm

7:00am - 4:00pm 7:30am - 8:30am 8:30am - 10:30am

10:30am - 10:45am Break

Noon - 1:15pm

1:30pm - 2:30pm

2:30pm - 2:45pm 2:45pm - 4:45pm

Breakfast Buffet Bioterrorism Ronald Blanck, D.O. 10:45am - 11:45am Legal & Regulatory Issues Concerning Chronic Pain Management Kristi Dover, Pharm.D Keynote Luncheon Joe Gagen, J.D. Legislative Grassroots Trainer Sponsored by Pfizer HeartSaver CT Scanning George Rogers, M.D. Break 4 Breakout Workshops Workshops 1, 2, & 3 repeat of Friday morning Workshop 4 - Grassroots Lobbying Joe Gagen, J.D. Sponsored by Pfizer

Registration Open

6:30pm - Midnight

Sunday, June 16

7:30am - 10:30am 7:30am - 8:00am 8:00am - 12:15pm

Registration Open Breakfast Buffet *Risk Management Program Sponsored by Dean, Jacobson Financial Services, LLC Texas Medical Foundation TMLT/TMIC

President's Banquet

* This course designated by the Texas Osteopathic Medical Association for one (1) hour of education in medical ethics and/or professional responsibility.

Fifth Annual ATOMA Golf Tournament

Texas Osteopathic Medical Association's golf tournament

Proceeds received from the golf tournament will be used by the Auxiliary to fund

Yellow Ribbon Youth Suicide Prevention Program

Scholarships to The University of North Texas Health

Science Center Students

- →The Educational Endowment Fund
- →The Osteopathic Health Foundation
- →The National Ad Campaign

The Golf Tournament will be held Friday, June 14, 2002 at the River Place Country Club in Austin, in conjunction with the Texas Osteopathic Medical Association's Annual Convention. As in the past, the tournament will be coordinated and sponsored by:

Dean, Jacobson Financial Services

All exhibitors may play golf at the TOMA Member rate of \$75 instead of \$150, if they are a Tee Sponsor at the Silver, Gold, or Platinum Level

Sponsorship Benefit Incentives: ATOMA Platinum - \$1,000.00

Entitles the sponsor to have: · A Sponsorship Large Sign, visible on the golf course . Full page advertisement in golf program A complimentary player to play in the tournament · Verbal recognition at awards ceremony Recognition in the Texas DO Magazine ATOMA Gold - \$500.00 Entitles the sponsor to have · A Sponsorship Sign, visible on the golf course · Verbal recognition at awards ceremony 1/2 page advertisement in golf program Recognition in the Texas DO Magazine ATOMA Silver - \$250.00 Entitles the sponsor to have: · A Sponsorship Sign, visible on the golf course · Recognition in the Texas DO Magazine • 1/4 page advertisement in golf program ATOMA Bronze - \$100.00 A Sponsorship Sign, visible on the golf course · Recognition in the golf program _____ Yes. I would like to be a sponsor Amount **Golf Fee** Recognition to read: Signed: Email Name of person authorizing sponsorship Check or Credit Card # **Expiration Date** Signed _ Name on card Billing address: Mail to: ATOMA Golf - 1415 Lavaca St. • Austin, TX 78701 - Attn: Paula Yeamans **Golf Registration Information** Handicap Name Name Handicap Sponsor forms also available at www.txosteo.org

Texas Practice Sites

Are you looking for a new opportunity in Texas? Are you looking to recruit medical professionals to your clinic, hospital or office? Then here's a program for you!

Texas Practice Sites is a no-cost medical opportunity matching program, and is a collaborative project made possible through a partnership between: East Texas Area Health Education Center, The Office of Rural Community Affairs, the Texas Primary Care Office (at the Texas Department of Health), The Robert Wood Johnson Foundation, the North Carolina Office of Rural Health and the Department of Health and Human Services Bureau of Primary Health Care.

Texas Practice Sites uses software developed by the North Carolina Office of Rural Health. Its framework is a Microsoft Access database, but it's actually much more. Through the software, we are able to match candidates and sites on a variety of preferences, such as community size, type of practice, specialty, and regional location. Once a match is made, the candidate receives a profile of each site to which they matched. The candidate then decides which sites interest them, and lets our office know. At that time, the candidate's profile is sent out. No candidate's information is shared with a site without that candidate's express permission. Once a site receives a profile, they are asked to contact the candidate within five business days to discuss the opportunity and decide if they have further interest in each other. The site is also asked to contact Texas Practice Sites within two weeks to provide disposition of the referral. Since sites receive only profiles of candidates who specifically requested to be referred, all sites can rest assured that all candidates are self-selected. This means they have a genuine interest in pursuing the opportunity; know something about the site, and about the community.

Opportunities are recruited from all areas of Texas, including Health Professional Shortage Areas (HPSA). There are vacancies in rural and metropolitan areas, throughout all public health regions. We can accept any recruitment request, regardless of location or size of practice, for health professionals at the registered nurse level or above.

Candidates are recruited from various sources, including residency and other educational programs, through the Area Health Education Centers, through newsletters, and through word of mouth, To all medical professionals, remember: Somewhere in Texas, someone needs you!

The program is coordinated by Cathryn M. Gleasman, Program Specialist at the Texas Department of Health, Texas Primary Care Office. Currently, there are nearly 300 opportunities for medical professions ranging from registered nurse to certified nurse midwife, physician assistant to obstetrician, and dental and mental health care professionals. Many opportunities have the potential to be Loan Repayment sites, and many can accept National Health Service Corps Scholars. We also have approximately 130 candidates registered in the database who are seeking opportunities.

We encourage anyone who would like to utilize our no-cost recruitment program to contact us about enrolling in Texas Practice Sites. Ms. Gleasman can be reached at 512-458-7518, extension 2179 or at <cathy.gleasman@TDH.state.tx.us>. Public Health Technician Vickie Hamilton can be reached at 512-458-7518, extension 3058 or <vickie.hamilton@TDH.state.tx.us>. Dexter Jones at the East Texas Area Health Education Center can be reached at 903-877-5788 or at <Dexter.Jones@uthct.edu>. Robin Wright at the Office of Rural Community Affairs can be reached at 512-936-6732 or <rwright@orca.state.tx.us>. Texas Practice Sites can be accessed on the Internet at <www.texaspracticesites.org>.

Compass 21 Transition Period Scheduled to End On April 7

Effective at midnight on April 7, claims submitted to the National Heritage Insurance Co. (NHIC) – administrator of the state Medicaid program – must have the new Texas Provider Identifier (TPI) for the billing and performing provider number. NHIC will deny claims using the old Medicaid number.

The denial will appear on the physician's Remittance and Status Report and will instruct the physician to resubmit the claim using the billing/performing provider number. NHIC also will reject electronic claims that use the old Medicaid number, with instructions on the Rejection Report to resubmit using the TPI.

This marks the end of the transition to the Compass 21, the new claims processing system. NHC has been allowing physicians to submit either the TPI or the old provider number as the billing and/or performing provider number for claims processing. After April 6, physicians will need to resubmit claims that have been denied as a new claim using the TPI. Resubmitted claims that are past 95 days from the date of service must be submitted on paper with a copy of the Remittance and Status Report or Rejection Report within 180 days from the date of the report.

An analysis of claims by NHIC and state Health and Human Services Commission officials shows there were 19,438 paper and electronic claims submitted with the old Medicaid provider number in December. That had dropped to 15,360 in January.

Sherry Travis, NHIC business relations director, says the company is identifying the physician and other health care professionals who continue to submit claims using the old provider numbers and will contact them to ensure they have the TPI and understand the timeline. For more information, see the NHIC Web site at <www.eds.nhic.com>.

Ease Through Management Transitions with TOMA Physician Services

Many physicians face a significant management transition in their practice at one time or another. Perhaps an experienced manager/administrator has left the practice or is taking an extended leave, such as maternity leave. During such times, it is important to maintain balance in your practice operations. To help you through transitional times, TOMA Physician Services consultants can offer their experience and expertise by serving as interim managers/administrators for your practice under direction from you and your physician colleagues. And while managing the practice, they can find ways to improve your operations and maintain efficiencies.

David Blackwood, M.D., an Abilene cardiologist in group practice, has been working with Physician Services for several months since the group's practice administrator left. Because the practice had been experiencing a reduction in revenue in spite of its burgeoning business, Dr. Blackwood saw the transition to new management as a time to introduce changes. He turned to Physician Services because TOMA's consultants recently had completed a full operations assessment of the practice and already identified areas needing improvement.

"Most physicians don't know how to root out operational problems and then create solutions," Dr. Blackwood said. "Physicians are basically 'nice guys' who have difficulty making hard decisions about personnel, processes, and that sort of thing."

As interim practice managers, TOMA consultants have been able to oversee staff changes, vendor contract negotitions, and other measures that have cut costs and saved the practice thousands of dollars up front. "Our staff had concluded that the solution to one problem was to revamp the whole dictation system, to the tune of \$65,000," Dr. Blackwood said. "The consultants came in and recommended changes costing only \$35,00. That savings alone more than paid for their interim management fee. Plus, the consultants have vast experience because they work with physicians all over Texas."

Physician Services customizes the interim practice management arrangement, which can last as long as necessary, to each practice's needs. For instance, it may include on-site management by the consultant a certain number of days per month along with daily telephone consultation. Specific services might include management, billing, and collections training for the staff, a managed care processes/reimbursement review, and help with recruiting and screening manager/administrator candidates.

To learn more about how TOMA's interim practice management services can help you, contact a TOMA consultant today at 800-523-8776 or <physician.services@texmed.org>.

News from the Texas Department of Insurance

Montemayor Acts to Stop Long-Term Care Rate Spirals

Commissioner Jose Montemayor has issued new consumer protection rules to deter insurance companies from offering unrealistically low prices on long-term care insurance policies, only to raise them later to unaffordable levels.

The rules apply to long-term care policies issued on and after July 1, 2002. House Bill 2482 of the 2001 Legislature, sponsored by Representative Ann Kitchen of Austin and Senator Judith Zaffrini of Laredo, authorized Montemayor to issue the rules.

"Long-term care insurance is growing in popularity, but rate instability and disclosures concerning possible future rate increases have become serious problems," Montemayor said. "Some consumers have had no choice but to drop their coverage because of spiraling rates - sometimes at an age when they are most likely to need it. These new rules will require companies to be more forthcoming about the possibility of future rate increases. They also will provide consumers with information to help them choose companies with good records of rate stability,"

The rules are consistent with model rules adopted by the National Association of Insurance Commissioners. Under the rules, insurance companies selling long-term care policies must submit actuarial memos or certifications telling the Texas Department of Insurance (TDI) that rates will cover anticipated costs under "moderately adverse experience."

TDI could ban an insurance company from selling long-term care insurance in Texas for up to five years if it habitually files inadequate initial premium rates.

Consumers receiving rate increases will have several options, including reduction in coverage to keep their premiums from rising. In some cases, based on a customer's age when a policy was issued and on cumulative rate increases over the life of the policy, a policy that lapses within 120 days after a premium increase would convert to a paid-up status with a shortened benefit period.

Starting July 1, insurance companies will be required to make crucial rate disclosures when a consumer applies for a long-term care policy or enrolls in a long-term care insurance plan. This information must include:

- · The premium rate or rate schedules applicable to the applicant.
- A 10-year history of premium rate increases on the applicable policy or similar policies in Texas or any other state.
- Notice that the policy may be subject to rate increases in the future – a fact that some companies failed to disclose adequately in the past.

An explanation of the consumer's options in the event of a future premium increase.

at your fingertips

Earn CME when and where you need it with TMLT's online risk management courses. By completing an online course, you will not only learn how to reduce your chances of being involved in a malpractice claim, but you can earn CME credit, ethics hours and a 3 percent premium discount (maximum \$1,000) per course. The following courses are currently available at www.tmlt.org:

- · Fraud and Abuse Prevention: What Physicians Need to Know
- How You Can Stay on the Right Side of the Law: Beginning, Maintaining and Ending Physician/Hospital Relationships
- Medical Records Handbook for the Physician's Office
- Streetwise

For more information, please visit the TMLT web site at www.tmlt.org or call (800) 580-8658.



TEXAS MEDICAL LIABILITY TRUST

Opportunities

-Unlimited

PHYSICIANS WANTED

CARDIOLOGIST - BC/BS invasive. noninvasive cardiologist to join a growing medical school faculty group in Fort Worth, Texas, The practice provides complete cardiovascular services to a broad range of patients in an attractive urban setting. Clinical appointment to the University of North Texas Health Science Center affords opportunities in Clinical and integrated Basic Science Research. Teaching opportunities include hospital house staff and students in an exciting newly integrated curriculum. The salary is competitive, and the benefits package outstanding. Fort Worth living is magnificent. excellent schools, world-class museums, and theater, nearby lakes, golf courses, equestrian activities and four professional sports, all in a friendly climate. Send your curriculum vitae and three letters of recommendation to: Frederick Schaller, D.O., Chair Search Committee Internal Medicine UNT Health Science Center, 3500 Camp Bowie Blvd., Fort Worth, TX 76107-2699, <fschalle@hsc.unt.edu>. An EEO/Affirmative Action Institution (01)

DALLAS – Physician needed at walk-in GP clinic. Flexible hours or part-time. 214-330-7777. (11)

LONGVIEW/TYLER – Physician opportunity to work in low stress, office based practice. Regular office hours. Competitive salary plus benefits. No call and no emergencies. Call Carla Brewer at 888-525-4642 or FAX CV to 972-261-1707. (25)

POSITIONS WANTED

BOARD CERTIFIED FAMILY PHYSI-

CIAN (No OB). Desires to relocate to Texas. Enjoys OMT. Looking for permanent full time position, preferably close to my family in DFW area. Please contact me at (Home) 847-662-6196, (Cell) 847-971-6855. (O2)

BOARD CERTIFIED FP for outpatient

full time, part time or locum tenens, prefer 60 miles radius of Dallas/Fort Worth area. \$65.00 per hour. Excellent references will be furnished. Call Eric M. Concors, D.O., at 214-365-9013. Leave message. (13)

PRACTICE FOR SALE/RENT

FOR SALE – FAMILY PRACTICE, Austin, Texas. Net \$200,000/no hospital. Will finance. Will work with new associate/owner during transition period. Contact TOMA at 800-444-8662. (09)

FOR SALE – Family Practice, Dallas, Texas. No hospital. Will work with new owner during transition period. Established practice 40 years-plus. Call TOMA 800-444-8662. (23)

MISCELLANEOUS

FOR SALE: ANTIQUE OSTEOPATHIC TREATMENT TABLE, good condition, \$4,000 or best offer; antique electric spinolator table, fair-good condition, \$4,000 or best offer. 903-583-8328, for pictures: <mkassio@hotmail.com>.(12)

CLASSIFIED ADVERTISING RATES & INFORMATION

Call Trisha at the TOMA Office • 512-708-8662 or 800-444-8662

If you want to work the rest of your life... ...that's your business.

If you don't... ...that's our business!

Call us.

DEAN, JACOBSON FINANCIAL SERVICES, LLC

3112 West 4th Street (76107) P.O. Box 470185 Fort Worth, Texas 76147-0185

Local 817-335-3214 Metro 972-445-5533 Toll Free 800-321-0246

(SECURITIES SOLD THROUGH LINSCO/PRIVATE LEDGER, A REGISTERED INVESTMENT ADVISER) (MEMBER NASD/SIPC) Texas Osteopathic Medical Association 1415 Lavaca Street Austin, Texas 78701-1634

CHANGE SERVICE REQUESTED

PRSRT STD U.S. POSTAGE PAID AUSTIN, TEXAS Permit No. 1539

DID YOU KNOW?

Included among the many products and services we offer is:

ASSET PROTECTION

Analysis of how assets are held and their vulnerability to creditors Family Limited partnerships; Foreign Trusts; protected investment vehicles Risk Management strategies and risk transfers to minimize loss exposures Coordinate asset protection strategies with overall financial planning goals

Call the financial planners you can trust.

DEAN, JACOBSON FINANCIAL SERVICES, LLC

Fort Worth (817) 335-3214 Dallas Metro (972) 445-5533 Toll Free (800) 321-0246

The only financial services firm endorsed by the Texas Osteopathic Medical Association.