

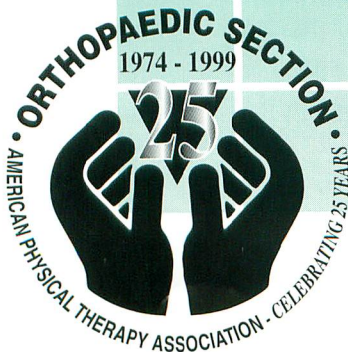
# ORTHOPAEDIC

# PHYSICAL THERAPY PRACTICE

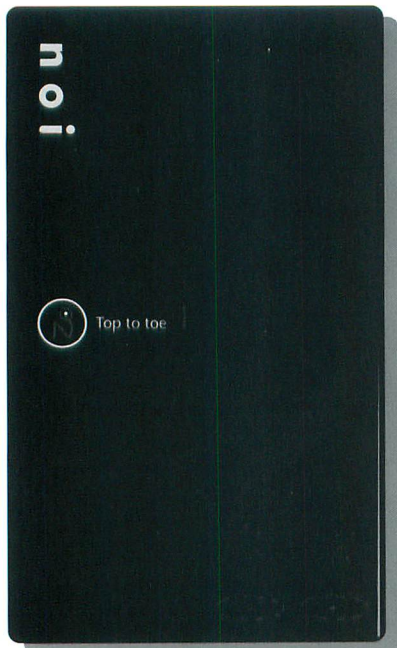
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VOL. 11, NO. 3

1999



American Physical Therapy Association



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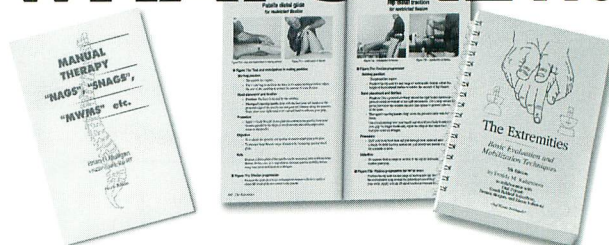
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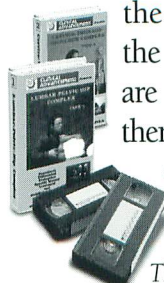
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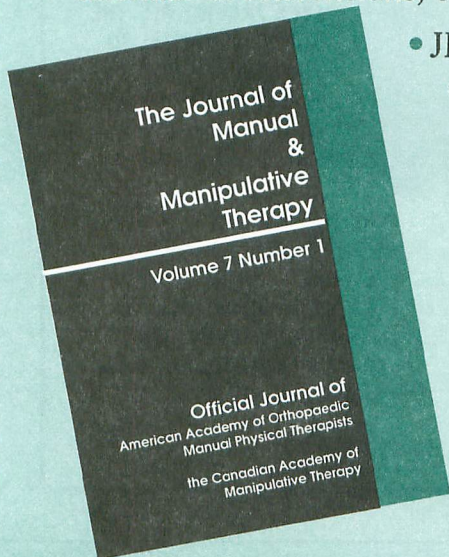
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**DEADLINE:** September 3, 1999

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**DATES:** Friday, Nov. 19, 1999  
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**LOCATION:** St. Albert, Alberta, Canada

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**DEADLINE:** Nov. 1, 1999

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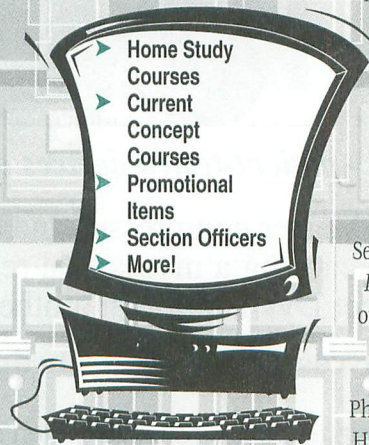
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# ORTHOPAEDIC PHYSICAL THERAPY PRACTICE

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### MISSION

The mission of Orthopaedic Section of the American Physical Therapy Association is to be the leading advocate and resource for the practice of orthopaedic physical therapy. The Section will serve its members by fostering high quality patient care and promoting professional growth through:

- Advancement of education and clinical practice,
- Facilitation of quality research, and
- Professional development of members.

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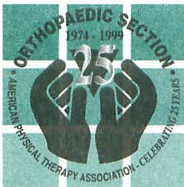
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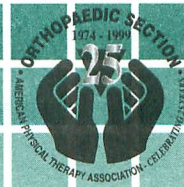
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## Editor's Message



### Challenges and Opportunities

After attending the House of Delegates and Annual Conference, I came home with mixed feelings—feelings of excitement and of challenge. As always, I was excited about all the possibilities that lay before us. But also, I was even more aware of the plight of a growing number of physical therapists—unemployment. It seemed everyone knew someone unable to find a job. I knew that new graduates were having a tough time finding jobs, but these were experienced therapists.

Although unemployment is a scary thing, it forces us to find another way. In PT, we are accustomed to that. We are taught to improvise and adapt when we don't have exactly what we need. How many of us have sent patients home with instructions to use frozen vegetables for an ice pack, or a pound of rice or dry beans for ankle weights? We are good at improvisation. Now we are challenged to improvise even more.

While unemployment among physical therapists is only about 2½% to 3%, unemployment at any rate is new to our profession. APTA has answered with some alternatives to help members remain members. Two changes include the option of quarterly payment of dues, and the institution of a grace period for renewing membership in cases of hardship. In addition, APTA continues to battle against the \$1500 Medicare cap and the changes that have occurred as a result of PPS and the Balanced Budget Act. While those hardest hit by these changes appear to be physical therapists and physical therapist assistants practicing in home health and skilled nursing facilities, orthopaedic therapists have not been spared. Cost-cutting measures are occurring across the board.

Times of change are also times of opportunity. As a profession, the majority of us have typically relied on hospitals or corporate facilities for employment. Now, we have to find other ways to access the marketplace. Just as the private practitioners in the past, once again we have to find our niche and provide quality service. For some, that niche will remain in the traditional environments. For others, it may be as a PT at an in-

dustrial plant, for a dance company, or at a Veterinarian's office. Direct access will provide physical therapists better opportunity to practice in these environments and will allow PTs to evaluate and intervene with any client seeking our services. Clients would not be restricted to referral only, but would be able to seek the services of physical therapists, just as they currently do for physicians, chiropractors, personal trainers, massage therapists, and others. We must continue to work hard toward our goal of direct access in all states. Achievement of this goal will facilitate our practice opportunities.

Times of change are often times of controversy as well. Finding a new path is often difficult and there are always those who would challenge you. New ways of thinking are sometimes hard to accept. For instance, the Animal Physical Therapist SIG is a somewhat controversial group. Some members of our organization don't feel there is a place for animal physical therapy and argue that it results in causing the term "physical therapy" to become too generic. Others believe it is a practice area in great need of our services and a new and exciting way to expand our practice. The open forum for Delegates and Component President's held at Annual Conference to discuss "Vision 2020" was evidence that animal physical therapy is a controversial area of practice. While many see it as an opportunity, others strongly believe that this area of practice is certainly not an entry-level skill, if in the domain of physical therapy at all. Haven't we said the same about other areas of "niche" practice in the past that have now become integrated into physical therapy?

Challenges and opportunities. Every day, we ask our patients to meet the challenges that both we and the external environment provide them. Every day, we ask our patients to accept responsibility for their own wellness and recovery. Every day, we ask our patients to see all the opportunities that lay before them, although they are often masked. Today, we must ask ourselves to do the same.

In this issue of *OP*, Diane Dalton con-

tinues our series of articles related to the *Guide to Physical Therapist Practice* and illustrates use of the *Guide* with 2 case presentations. Ed Dobrzykowski gives us an article, which addresses the importance of outcomes management in the validation of the practice of physical therapy, as well as how we might facilitate that in the clinic. Michael Knox and Christopher Scott have each written an article that provides both PTs and PTAs with options for interventions to use in the clinic. In addition, Nancy White has given us the third of our 4-part series on the history of the Orthopaedic Section, covering the 1985-1992 time period. Be sure to read the SIG newsletters as well, as there is much to learn about these specialty areas of practice. Especially interesting are articles from Shaw Bronner and Amy Wightman about working with a professional dance company. Lastly, if you have not already done so, please complete a reader survey form, either in this issue of *OP* or on the website. We would really like to hear from you.



Susan A. Appling, MS, PT, OCS  
Editor, *OP*

# President's Message

## SME 1999

Members of the Orthopaedic Section Board of Directors (BOD) were wearing their orthopaedic physical therapy advocacy hats at the Washington, DC meeting held in June. Representing Section members at the House of Delegates and other meetings hosted by the American Physical Therapy Association (APTA) BOD and staff was our priority at this meeting. Besides these activities, Orthopaedic Section and *Journal of Orthopaedic and Sports Physical Therapy* BOD meetings were also held, but for the first time (per our bylaw change) the Section did not hold a business meeting at SME. Our sole annual business meeting will be held at the Combined Sections Meeting. The remainder of this report highlights SME activities.

## APTA House of Delegates

The 1999 House of Delegates was marked by a tremendous degree of activity, which led to periods of wonderful productivity and to other periods of frustrating stagnation. As described in *OP* 1999;11(2), the Orthopaedic Section was an active participant in 3 RCs. The first was the motion: "That the following APTA policy be adopted: The APTA will provide financial and/or staff support only to those Chapters involved in legislative and regulatory efforts that are in compliance with the *Guide to Physical Therapist Practice*." We withdrew this RC during the House of Delegates after the APTA BOD amended an existing policy: Procedures for Determining Assistance to Components (BOD 06-98-05-14). The following sentence will be added as a third criteria "3.) The intended course of action to address the issue should be consistent with the principles and language of the *Guide to Physical Therapist Practice*. At the pre-House Group Discussion Meeting, I was able to articulate our concerns about Chapters legislatively negotiating away any intervention listed in the *Guide*.

The remaining 2 RCs that we cosponsored with the APTA BOD did not make it to the floor of the House, as was the case with many other RCs. I believe the Association's governance process lets all of us down when there is any business left unattended. The 2 RCs "Position on Interventions Exclusively Performed by Physical Therapists" and "Position on

Continuing Education for Physical Therapist Assistants and other Supportive Personnel" will be revisited by the APTA BOD at their November 1999 Board Meeting. The Orthopaedic Section will continue to work with APTA Board on issues related to these 2 RCs.

## Roller Coaster Ride Revisited

In *OP* 1998;10(4), I described my post-Fall Section BOD meeting roller coaster ride. One of my frustrations was the lack of progress in the development of an effective legislative coalition made up of the Orthopaedic Section, APTA and Association Chapters. A meeting held at SME to discuss manual therapy legislative issues (chaired by Jerry Connolly, APTA staff, and attended by a number of Section and Chapter representatives) left me with a sense of pride and hope for the future. During this recent meeting a report summarizing the chiropractic legislative activity in 16 states (during the first 5 months of 1999) was reviewed. Fortunately strong Chapter leadership backed by APTA, Section, and AAOMPT support has led to a number of important legislative victories; victories that will set positive precedent for states the chiropractors will target in the future. The materials and resources developed by the Section and APTA were cited by the Chapters as being extremely important. The efforts by many Section members spearheaded by Elaine Rosen (past Section Director), Steve McDavitt, and Helene Fearon (current Practice Committee Co-chairs) has paid huge dividends. Another reason for my optimism comes from all parties recognizing that our work is not complete and that we must broaden our strategies so more of our efforts are proactive in nature. A decision was made to hold a manual therapy long-range strategic planning meeting this fall. The Orthopaedic Section with APTA staff will organize the meeting. It is hoped that a draft of the plan can be presented at the Section's Open Forum portion of our Business Meeting at CSM 2000. It has been my hope from the start that the process developed for manual therapy legislative and regulatory activities will become a template for other legislative challenges frequently faced by our Association.

## Membership Committee

Since our inception one of the few issues the Orthopaedic Section has NOT had to concern itself with was the potential threat of declining membership. We would be foolish to think that we will not be impacted by the current decline in Association membership. Although we have taken a number of steps to retain current members and attract new members, we have never had a Membership Committee to coordinate and spearhead our efforts. The Section BODs unanimously agreed to make a bylaw editorial change to allow for the formation of such a committee. We believe this addition to the Section's governance structure will be vital to our future.

## 1999 Fall BOD Meeting

For the first time the Section's Fall BOD meeting will be held in Alexandria, Virginia. APTA staff will attend portions of our meeting so we can discuss areas of mutual interest and concern. I am very excited about the bridges that can be built and strengthened between the Orthopaedic Section and the APTA. These links will allow the Section to better serve and represent our membership.

## ETC.

1. Thank you Orthopaedic Section office staff for the tremendous support leading up to and during SME.
2. Thank you Fran Welk (APTA Treasurer-elect) for your efforts as the Section's APTA BOD liaison the past 2 years.
3. Welcome Randy Roesch APTA Secretary! Randy will be the Section's APTA BOD liaison this year.
4. Congratulations to Frank Welk, Janet Bezner, and Pamela Duffy, Section members who were elected to APTA BOD positions.



William G. Boissonault, MS,  
PT, DPT  
President



# Orthopaedic Physical Therapy Practice Reader Survey

In an effort to continue to improve the quality of *Orthopaedic Physical Therapy Practice*, we would like your feedback. Please complete the following survey and return it to the Orthopaedic Section office at your earliest convenience. The information you provide will be used to help us better define the mission of *OP*, and will allow us to know your expectations of this publication.

1 *OP* contains a variety of information. Please rank order the following list in terms of a given topic's level of importance to you. (1=most important, 8=least important).

- \_\_\_\_\_ Abstracts & Reviews
- \_\_\_\_\_ Advertisements (products & services)
- \_\_\_\_\_ Announcements (RFPs, Awards, etc.)
- \_\_\_\_\_ Clinical/Feature Articles
- \_\_\_\_\_ Continuing Education Announcements/Opportunities
- \_\_\_\_\_ CSM & Annual Conference Programming
- \_\_\_\_\_ Section News & Business
- \_\_\_\_\_ Special Interest Group News/Business

2 In terms of quantity of information, would you like to see more, less, or the same amount of each of these topics?

	Less	Same	More
Abstracts & Reviews	_____	_____	_____
Advertisements (products & services)	_____	_____	_____
Announcements (RFPs, Awards, etc.)	_____	_____	_____
Clinical/Feature Articles	_____	_____	_____
Continuing Education Announcements/Opportunities	_____	_____	_____
CSM & Annual Conference Programming	_____	_____	_____
Section News & Business	_____	_____	_____
Special Interest Group News/Business	_____	_____	_____

3 How would you rate the quality of each of the following content areas currently featured in *OP*?

	Needs Improvement	Satisfactory	Excellent
Abstracts & Reviews	_____	_____	_____
Advertisements (products & services)	_____	_____	_____
Announcements (RFPs, Awards, etc.)	_____	_____	_____
Clinical/Feature Articles	_____	_____	_____
Continuing Education Announcements/Opportunities	_____	_____	_____
CSM & Annual Conference Programming	_____	_____	_____
Section News & Business	_____	_____	_____
Special Interest Group News/Business	_____	_____	_____

4 Which of any of the following *OP* items would you like to see posted on the Orthopaedic Section's website (as Member's Only Access)?

- |  |                                   |
|--|-----------------------------------|
| _____ Table of Contents Only           | _____ Abstracts of Articles       |
| _____ Section Business Meeting Minutes | _____ Officer & Committee Reports |
| _____ SIG Business Meeting Minutes     | _____ Full Text of <i>OP</i>      |

5 Please provide us with the following demographic information.

	Age		# of Years of Practice		
	under 30	_____	0-5	_____	
	31-40	_____	6-10	_____	
	41-50	_____	11-15	_____	
	51-60	_____	16-20	_____	
	over 60	_____	over 20	_____	

6 Suggested topics/authors for future articles.

\_\_\_\_\_

7 Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Thank you for completing the survey.* Please return the survey by fax or mail to:  
Orthopaedic Section, APTA, 2920 East Avenue South, Suite 200, La Crosse, WI 54601, 608/788-3965, website: [www.orthopt.org](http://www.orthopt.org)

We look forward to your feedback!

# Growth: 1985 through 1992

Nancy White, MS, PT, OCS

This article is the third in a 4-part series celebrating the history of the Orthopaedic Section over the past 25 years. The first 2 articles written by Stanley Paris, Dorothy Santi, and Carolyn Wadsworth described the enthusiasm, vision, and ideals of the founding members and the dedication and perseverance of those who were committed to developing a strong organization to accomplish their goals. This article covers the time period between 1985 and 1992.

The Section's first decade was marked by tremendous growth and by the establishment of priorities including: achieving specialist certification, protecting the practice of orthopaedic physical therapy, and obtaining national and international recognition for the Section and its members. The second decade will be remembered by many for the achievement of several of these goals and for the significant steps we took toward the accomplishment of others. Recognition of the orthopaedic clinical specialist, the development of high-quality educational programs for Section members, and the emergence of the Section as a major contributor to physical therapy research were all highlights during this time period.

## SPECIALIZATION

Hundreds of Section members contributed literally thousands of hours and untold amounts of energy to the dream

of achieving recognition of specialty practice in orthopaedic physical therapy. It is the Section's hope that several of these individuals will contribute to a later article highlighting the dreams, frustrations, and victories that occurred along the road to specialization.

It was the strong feeling of many of the early proponents of specialization that a practical examination was necessary to adequately assess the skill level of physical therapists seeking recognition as orthopaedic clinical specialists. Considerable time, energy, and financial resources were spent in an attempt to develop and validate a combined practical and written examination. Because of the numerous and varied approaches utilized in orthopaedic physical therapy practice in the United States in the 1980s, it became clear that reaching consensus on a practical examination by the agreed upon deadlines was close to impossible. The target examination date had been extended numerous times and both financial and human resources were running short.

The Orthopaedic Competency Document, originally written by Carolyn Wadsworth and Jim Robinson, was finalized by Betty Sendelar, Eileen Volowitz, and Richard Bowling. This document was finally approved by the American Board of Physical Therapy Specialties (ABPTS) in 1987. This provided the blueprint for the Specialty Council to put the finishing touches on the exam and set a date for its administration.

In April 1988, the members of the Orthopaedic Specialty Council and subcommittees resigned when the disagreement with the ABPTS regarding the inclusion of a practical component for the examination could not be resolved. Addition of a reliable and valid practical examination was not ruled out for future examinations.

In May 1988, Section President Jan Richardson appointed a new Specialty Council. The new Council members, Joe McCulloch (Chair), Rick Ritter, and Susan Stralka, utilized the work of previous Specialty Councils to prepare and administer the examina-

tion. The Orthopaedic Competency Document and hundreds of test items developed under the leadership of previous Specialty Councils were used by the new council to finalize the examination.

Final approval of the application process and the criteria to sit for the examination were approved by the ABPTS in 1988. By September 1988, all test items were ready for the meeting between the Specialty Council and the testing agency for final examination development. Due to a sudden change in testing services, the process was again put on hold and a new examination date was set for June 1989. With the new date set, the Specialty Council spent many long days with test preparation consultants reviewing, referencing, and refining each test item. It was clear that accurately defining advanced clinical practice and ensuring that the examination reflected this practice would be an ongoing process. But the first examination was finally ready!!

The first specialist examination was administered on-site on June 10, 1989, at APTA's Annual Conference in Nashville, Tennessee. Twenty-six individuals passed the exam and became the first Board Certified Specialists in Orthopaedic Physical Therapy.

The Specialty Council continued its work to refine the examination and to add additional questions to the item bank through the continuation of item writer workshops. Specialty Council member, Mary Milidonis, prepared a 2-year plan to develop the Description of Advanced Clinical Practice in Orthopaedic Physical Therapy that is used today. By 1992, there were 185 Board Certified Orthopaedic Clinical Specialists.

The topic of a practical examination continued to be discussed and debated. Several members who originally fought hard for the inclusion of the practical component realized the ongoing difficulty in developing and validating such an examination. Many of these individuals began the early work toward a goal that is finally being realized today—the certification of clinical residency programs. It is the hope of the Section that the dreams of the early pioneers in orthopaedic physical therapy specializa-



Steve Rose at the inaugural Black Tie & Roses in 1998.

tion will finally be realized with a combination of a written examination and a certified clinical residency program.

## EDUCATION

The Orthopaedic Section has always enjoyed a strong reputation for providing high-quality, low-cost educational programs for its members. The Education Committee Chairs, Jan Richardson (1985-1987) and Annette Iglarsh (1987-1992), deserve much of the credit for the tremendous growth in the area of postprofessional continuing education within the Orthopaedic Section.

In support of clinical specialization, the Section developed the continuing education course, Review of Advanced Competencies in Orthopaedics. The course was first held in 1988 and was tremendously popular among physical therapists preparing for the specialist examination. The course continued to be offered on an annual or semi-annual basis for 8 years and was held in different geographic regions. Section officers attended these courses and held small, informal membership meetings in an attempt to reach Section members who might not regularly attend national meetings.

The first meetings to discuss the production of a home study course were held in 1988. Continuing education was becoming mandatory in many states and financial pressures were making travel to courses difficult for many physical therapists. After an initial attempt to contract with an outside publisher, the Section began the in-house publication of its tremendously popular Home Study Course series. Annette Iglarsh, Chair of the Education and Program Committee worked to develop the series. Kent Timm served as the first Editor and Sharon Klinski was Managing Editor.

Educational programming at Combined Sections Meetings also grew tremendously during this time period. The development of Special Interest Groups and Roundtables led to the need for specialized programming. In addition to combined programming with other Sections, the Orthopaedic Section began offering specialized programming in occupational health, manual therapy, performing arts, foot and ankle, head and neck, and pain management. During this time period, the Orthopaedic Section's program for CSM progressed from a simple, half page offering with no overlap of programs to the extensive, highly-specialized program we enjoy today.

## RESEARCH

From 1985 to 1992, Section Presidents Jan Richardson and Bob Deusinger helped to establish the Orthopaedic Section as a strong supporter of physical therapy research. Due in part to the success of its educational programs, the Section had the financial ability to demonstrate this commitment through gifts to the Foundation for Physical Therapy. Because of this early commitment, the Orthopaedic Section became a leader in funding research to evaluate the effectiveness of orthopaedic physical therapy practice.

In 1988, the Orthopaedic Section recognized the vision and contributions of one of its members, Steven J. Rose, with the development of the Rose Excellence in Research Award. This award was announced at the first annual Black Tie and Roses Reception, which was held in Dr. Rose's honor at the Combined Sections Meeting in Washington, DC. The Section also established the Steven J. Rose Endowment for Orthopaedic Research for the Foundation for Physical Therapy.

The physical therapy community and the Section experienced a tremendous loss with the death of Steve Rose in 1989. Dr. Rose's contributions to the Section and to physical therapy continue to be recognized and will long be remembered.

## PRACTICE

Several practice issues dominated the discussions at Section meetings during this time period. The Position Statement on Manipulation was developed and adopted in 1990. It was recommended at that time that schools show evidence of educational preparation of physical therapists to perform manipulative techniques and that states work to ensure that laws are protective of this practice.

Referral for profit continued to be discussed and debated. The ongoing dilemma of delegation and supervision of physical therapist assistants and physical therapy aides was discussed.



AAOMPT members gather for a pre-CSM joint program.

Surveys were taken and forums were conducted to determine a consensus among the membership. Although little consensus appeared to exist, the leaders of the Section used the available information to begin to develop a plan for appropriate utilization of support personnel.

The formal development of Special Interest Groups (SIGs) began with the recognition of the Industrial Physical Therapy (now known as Occupational Health Physical Therapists) SIG in 1992. Susan Isernhagen chaired the newly formed group. Founding of the Performing Arts Physical Therapy SIG, the Foot and Ankle SIG, and the Pain Management SIG quickly followed. The result of this development was a broadening in scope of a Section that was originally founded by individuals with a primary interest in manual therapy. The Section realized that its mission included representation of members in a wide array of practice settings. The Special Interest Group development served to provide a mechanism for members in various orthopaedic practice settings to exchange clinical information, provide education, define and protect practice, and promote and support research. The Section was strengthened in ways it had not expected!

## PUBLIC RELATIONS

The educational programs and financial gifts to the Foundation resulted in significant public relations for the Orthopaedic Section within the physical therapy community. Membership in the Section grew from 5,269 to 11,527 between 1985 and 1992. The public re-

lations committee chairs during this time period, Garvice Nicholson, Jonathan Cooperman, and Karen Piegorsch developed the Section's exhibit booth and brochure and began exhibiting at medical meetings throughout the country.

### SECTION PUBLICATIONS

With over 10,000 members, the Section's primary means of reaching its members was through its publications. *The Journal of Orthopaedic and Sports Physical Therapy (JOSPT)*, edited by Jim Gould and George Davies, became a monthly publication in 1986 and continued to be one of the Section's greatest benefits for its members. Thanks to the tremendous work of its editors and the support of both the Orthopaedic and Sports Sections, *JOSPT* continued its development from a newsletter for clinical exchange of information to a scholarly publication. Double-blind review of articles submitted for publication began in 1988.

In 1990, Gary Smidt was hired as the new editor of *JOSPT* and the journal office was moved to Iowa City, Iowa. Recognition of the *JOSPT* in *Index Medicus* had been a goal of the Section for several years. After numerous attempts, this goal was finally reached in 1992. By this time, *JOSPT* had a full editorial board and had grown both in popularity and respectability.

*The Bulletin of the Orthopaedic Section*, the Section's primary means of communicating Section news to its members, underwent another transition during this period. With the evolution of *JOSPT* to a more scholarly publication, the need existed for a means of exchange of clinical information on a more informal level. In 1989, the Bulletin was renamed *Orthopaedic Physical Therapy Practice (OP)* and was modified to include a combination of Section news, legislative and practice issues, and clinical articles. Christine Saudek was the Editor for the first year of publication. John Medeiros became Editor in 1990 and initiated the practice of writing editorials relating to practice issues. Often controversial, and never tame, these editorials have become a tradition. Members who had never found time to read this publication now at least began opening the front cover!

### ADMINISTRATION

The tremendous growth in membership resulted in a need for additional staff support and office space. Since its

### OTHER SIGNIFICANT EVENTS

1989—First Rose Excellence in Research Award presented to Don Neumann, PhD, PT, Gary Soderberg, PhD, PT, and Thomas Cook, PT for their article "Comparison of Maximal Isometric Hip Abductor Torques Between Hip Sides."

1990—Section celebrated 15th Anniversary (one year late!) with a gala featuring entertainer Nancy Wilson

1990—First Paris Distinguished Service Award presented to Stanley Paris, founder of the Orthopaedic Section.

1992—Jim Gould received the Paris Distinguished Service Award

1992—The American Academy of Orthopaedic Manual Physical Therapists (AAOMPT) was formed and held its first meeting in Vail, Colorado. The Orthopaedic Section began both formal and informal dialogue with the AAOMPT in an attempt to coordinate efforts and discuss topics of concern and interest to both groups. Recognition of clinical residency programs was a priority of the founding members of AAOMPT.

inception in 1979, the *JOSPT* office had been located in LaCrosse, Wisconsin. In 1985, the Section moved its office to Winter Park, Florida, and contracted with Pat Kirkbride to administer the Section's business. The following year, the Section relocated its headquarters to 505 King Street in LaCrosse, and David Thomack was hired to replace Pat Kirkbride as the Administrative Director. The Section's first computers were purchased for membership and financial records shortly after this move. The Section's growing staff and expanding programs soon resulted in a need for more space. In 1989 the Section moved into a larger office within the same building. Terri DeFlorian (then Pericak) was hired as David Thomack's assistant. With David's departure in 1990, Terri was promoted to Administrative Director.

The development of the Section's educational programs and publications resulted in the need for additional staff. In 1990, Sharon Klinski was hired to coordinate the Section's publications. Tara Fredrickson was hired in 1993 to coordinate the educational courses and to serve as Terri's assistant.

The Section's budget grew from \$200,000 in 1985 to \$1,300,000 in 1992. This increase was due to the growth in Section income resulting from the successful educational courses and the expenses associated with providing these new member benefits. Treasurers, John Wadsworth and Bob Burles, provided great leadership in financial planning and investments during this time of growth. Bob is also credited with bringing the Section into the computer age and earned the title "Mr. Wizard" for his skills and persistence.

By the early 90s, the Section was again outgrowing its space. The Board began discussing the possibilities of purchasing land and building a building to house the Section office. They didn't realize how quickly this idea would become a reality!

### SUMMARY

The period of time between 1985 and 1992 was a time of tremendous growth for the Section. The successful educational programs provided wonderful member benefits and were a great source of public relations and revenue for the Section. The leadership kept the Section strong by wise planning and innovative programs. They were successful in implementing specialization in orthopaedic physical therapy and built the groundwork for certification of clinical residency programs. The Section was a leader among APTA components in funding research in physical therapy and set the standard for others to follow.

The possibilities for the Section seemed unlimited in 1992. Demand for physical therapy in the health care arena had grown tremendously and times were great for physical therapists. Fortunately, the Section had laid the groundwork for practice protection and had the financial and organizational strength to be prepared for the challenges that lay ahead.



Nancy T. White, MS, PT, OCS is currently serving as Vice President of the Orthopaedic Section and a Board of Trustee for the Foundation for Physical Therapy.

# Facilitating Outcomes Management in Orthopaedic Practice

Ed Dobrzykowski, MHS, PT, ATC

The inculcation of provider and payer receptivity to the process of outcomes management throughout health care is a significant challenge, no more so than in the era of cost containment and constraints on reimbursement of services. Yet, a paradoxical situation exists. If practitioners do not make the necessary effort and complete the essential work to demonstrate rehabilitation effectiveness and efficiency, their very viability as practitioners in the future is questionable.

Physical therapists must collectively (in their profession) demonstrate leadership and contribute to the shaping of their own destiny through participation in an outcomes measurement process. Without a growing preponderance of evidence in support of the practice of physical therapy, it will undoubtedly become more difficult to refute an enigmatic payer community and change their question from "who will provide the care for the least expense?" to "how much did the patient get better, and who are the more effective and efficient practitioners?"

Fortunately, considerable work has been initiated in the development of outcome measures, systems, and data bases throughout this decade to begin to answer the latter question. Research by the North American Orthopaedic Rehabilitation Research Network, Focus On Therapeutic Outcomes, Inc. (FOTO™), Uniform Data System for Medical Rehabilitation (UDSMR), the LIFEware System<sup>SM</sup>, and others are facilitating the development and clinical use of outcome measures, methods for data collection, analysis, and reporting, and publications to assist physical therapists. The *Guide to Physical Therapist Practice*,<sup>1</sup> which describes categories of functional limitation/disability, patient/client satisfaction, and secondary prevention, provides a template for structuring physical therapist practice and classifying patient types.

Lessons can be learned from our colleagues in comprehensive rehabilitation vis-a-vis their 14-year history in use of the functional independence measure (FIM). The early provider consensus on a standard measure for program evalu-

ation measurement in inpatient rehabilitation has reaped many benefits. Numerous publications<sup>2-6</sup> have demonstrated the functional independence measure's psychometric properties, clinical utility, and its recognition by clinicians, case managers, and the payer community. The FIM has been used as the basis for the development of the MDS-PAC (Minimum Data Set-Post Acute Care) data set for the purpose of improving precision and responsiveness of the MDS. The FIM-FRGs (Functional Independence Measure-Function Related Groups) have been considered by the Health Care Financing Administration as the basis of a future prospective payment system for inpatient rehabilitation. In orthopaedic physical therapy practice, a similar movement towards consensus on a standard data set, analysis, and reporting will provide many similar opportunities.

## WHAT APPLICATIONS EXIST FOR OUTCOMES MANAGEMENT?

A number of applications have evolved for outcomes information, greatly enhancing the utility and value of the process of outcomes management. For example, outcomes have been utilized in continuous quality improvement, benchmarking, accreditation, marketing, sales, and research.<sup>7</sup> Data bases have been used for study of physical therapist effectiveness and efficiency,<sup>8-9</sup> creation of patient diagnostic groups and basis for a prospective payment system in rehabilitation,<sup>10</sup> and more recently as a cost saving method in an organization's continuing education budget by planning targeted education programs based upon outcomes.<sup>11</sup> Orthopaedic outcome data bases have been used to evaluate clinical outcomes of patients with orthopaedic impairments treated by physical therapists both with and without the credential of orthopaedic clinical specialist.<sup>12</sup>

Summary reports of program outcomes and action plans are essential in many areas of rehabilitation. There are specific requirements for continually meeting accreditation requirements of CARF...The Rehabilitation Accreditation Commission, and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) with their ORYX initia-

tive. The need for accreditation by one or both of these organizations combined with evolving recognition by the payer community of the value of outcomes management provides the impetus to begin the process of outcomes measurement, while providing an invaluable method to assess and compare outcomes of programs and practitioners with similar patients.

## WHAT ARE THE METHODS FOR A PROCESS OF OUTCOMES MEASUREMENT?

There are 2 principal types of outcomes measurement utilized in orthopaedic physical therapy that have been established and continue to evolve: 1) program evaluation methods, which utilize observations of overall effectiveness (change in patient health status, functional status, satisfaction) and efficiency (utilization, visits, and cost to achieve change) in programs and organizations; and 2) patient specific information, which documents progress at the individual patient level.

The template for design and methodology for a process of outcomes measurement in rehabilitation has been previously described.<sup>13-17</sup> Suggested questions to consider at the program evaluation level are listed in Table 1.<sup>14</sup> The design of the contemporary system of outcomes measurement in orthopaedic practice should include the use of a generic health status measure for larger group (program) comparisons, at least one reliable and valid functional status

Table 1. Program Education Questions

What is your practice location in the health care continuum?
What are the prevalent patient diagnoses?
Who are the customers seeking outcome information?
What are the questions that customers are asking?
Which outcomes do you wish to measure?
What outcome measures or systems are available?
What is the data collection protocol?
How will you train the staff?
How will you process the data?
How will you analyze and interpret the results?

measure, and the patient specific functional scale.<sup>13</sup>

For clinicians, there are new outcome measures and pragmatic methods evolving for assessment of patient outcomes. A recent article by Binkley<sup>13</sup> described the utility of functional status measures



If practitioners do not make the necessary effort and complete the essential work to demonstrate rehabilitation effectiveness and efficiency, their very viability as practitioners in the future is questionable.



by patient self-report, recognized the imperative for use of measures with acceptable psychometric properties, and discussed their use in clinical practice. The criteria to consider for selection of specific functional status measures to utilize in orthopaedic clinical practice includes reliability, validity, sensitivity, ease in administration, and application to a variety of patients.<sup>13</sup>

In comprehensive rehabilitation outcomes have been measured and documented for several years, but lack substantial information pertaining to the “what happened” or process of care delivery which led to those outcomes.<sup>18</sup> The outcomes management system in its design should provide a mechanism to link outcome measures, interventions, and clinician(s). In other words, link the “what happened to the patient” (outcome) to “how it happened” and “who provided care for the patient.” Clearly the need exists to improve and standardize documentation of the process of care and operationally define interventions in order to observe effects on outcomes. Additionally, there is the need to develop reliable methods for classifying patients into appropriate categories for outcomes reporting.

Finally, the outcomes management process must carefully consider data collection logistics, data processing, computer programming, statistical methods and analysis, and timeliness in reporting for management. This is a formidable task for many physical therapy practices, and has contributed to the

proliferation of performance measurement (outcome) data bases and systems used in rehabilitation.

#### WHAT ARE THE BENEFITS AND LIMITATIONS TO USE OF INTERNAL AND EXTERNAL PERFORMANCE MEASUREMENT SYSTEMS AND DATA BASES?

There are several vendors of performance measurement systems which are commercially available. These companies provide for a turn key method for outcomes data collection and reporting. Examples of vendors with performance measurement systems in rehabilitation are listed in Table 2.

The advantages to use of an external vendor include benefiting from the col-

lective experience of the data base and its clients, providing a greater number of patients in the data base for comparison and benchmarking, and the potential for use in performance measurement during the accreditation process. There can also be a payer perception of less bias than outcomes that are internally compiled. Also, outcome data base information is frequently used in research. The disadvantages to use of an external vendor can include the lack of custom or ad hoc reporting capabilities, redundancy of data collection, and management of data collection logistics.

The advantages to development and use of an internal outcomes management process includes the tailoring to one's patient population and impairments, enhanced buy-in by the staff, and integration with existing information systems. The disadvantages to use of an internal process include potentially smaller data sets for analysis, lack of external benchmarking, and the considerable time for development, programming, analysis, and report capabilities of the system.

The relative cost effectiveness of either method is unclear. There will be both measurable financial costs as well as implications for staff productivity. An external vendor system selected can become your program's “outcomes research and development arm.” The cost of a vendor solution is variable, and generally is based upon the mode for data collection (ie, scan forms, software), the number of patient episodes processed, and the level of reporting desired. An internally developed system may have more initial cost with research and development of an outcomes system, but incur less cost for data collection and reporting.

If an external vendor system is considered, several criteria should be evaluated.<sup>19</sup> Suggested questions to investigate are noted in Table 3.

#### WHAT FACTORS INFLUENCE SUCCESS IN OUTCOMES MANAGEMENT?

A successful outcomes management process artfully blends the collection of measures and indicators into information useful for several customers, ie, payers, clinicians, physicians, case managers, accreditation organizations. In order to enhance success and staff data collection compliance, the series of measures and indicators selected must be manageable and carefully balance information needs with brevity.

Table 2. Vendors of Performance Measurement Systems in Rehabilitation

Center for Rehabilitation Effectiveness  
Boston University, Sargent College  
635 Commonwealth Avenue  
Suite 407  
Boston, MA 02215  
PH: 617-358-0175  
FAX: 617-353-7500  
<http://www.bu.edu/cre/>

CareData.Com  
155 N. Wacker Drive, Suite 725  
Chicago, IL 60606  
PH: 312-849-4200  
FAX: 312-849-3060  
<http://www.caredata.com>

Focus On Therapeutic Outcomes, Inc.  
(FOTO)  
PO Box 11444  
Knoxville, TN 37939  
PH: 800-482-3686  
FAX: 423-450-9484  
<http://www.fotoinc.com>

Therapeutic Associates, Inc. (TAOS)  
10700 SW Beaverton-Hillsdale Hwy.  
Suite 622  
Beaverton, OR 97005  
PH: 503-626-7724  
FAX: 503-526-8734

Uniform Data System for Medical Rehabilitation (UDSMR)  
LIFeWare SystemSM  
82 Farber Hall  
SUNY-Main St.  
Buffalo, NY 14212  
PH: 716-829-2076  
FAX: 716-829-2080  
<http://udsmr.org>  
<http://lifeware.com>

**Table 3. Criteria to Evaluate External Vendor Systems**

How many and what types of practices and organizations are participating in the data base currently?  
How many patients are in the data base(s)? What does the comparison data base consist of?  
Does the data base provide predictive capabilities?  
What types of measurement systems are available?  
What outcome measures and indicators are included?  
What process measures (ie, intervention) are included?  
What are the measures' reliability and validity?  
What does the data collection process consist of ie, data format, transmission, and frequency of submission?  
What are the hardware requirements, if any?  
What is the data integrity?  
What types of management reports are available? What is the turn around time?  
Are special reports available? Is processed data available for a client's own internal analyses?  
What training and support services are available?  
Is credentialing process required?  
What are the contractual requirements and costs to participate?

Note: These preceding questions are from Hicks article; those listed below are my additions

Other:

Are there any limitations to use of the data publically?  
What applications of the data are available?  
May data be used for presentations and publications?  
What is the data base strategy for updates, improving utility, and adding value to the information for its clients?  
Is the system year-2000 compliant?  
Is the system an ORYX vendor for the JCAHO?

The selection of fewer, more precise questions at the design phase will facilitate staff comprehension, improve data collection compliance, promote quality of data collected, and build a clinician's, program's or organization's data base more quickly.

The clinician receptivity and acceptance of such a design will depend upon relevance to the clinician, practicality,

ease in scoring measures and data, and minimal respondent burden.<sup>13</sup> Additionally, data collection and compliance is facilitated by cooperation amongst the staff, which may reflect the individual team members intrinsic motivation and value seen for the outcomes process.<sup>20</sup> An understanding of these issues is critical as harried clinicians and support staff attempt to comply with outcomes data collection while continuing normal courses of patient treatment, documentation, billing, and operations. In any event, it is imperative that the management team drive this paradigm change by instilling a sustaining and pervasive vision of outcomes management in their organization.<sup>22</sup>

Many of the barriers and resistance to standardized data collection by physical therapists have been documented previously, including inconvenience and lack of time, lack of acceptance of operational definitions, inadequate training, and lack of supportive personnel to manage the data.<sup>21,23</sup> Other barriers for physical therapists include results which are not shared with everyone or used in a punitive rather than educational manner, insufficient financial resources, and lack of an integrated information systems plan (ie, clinical documentation, billing, outcomes, administrative) to support data collection, analysis, and reporting.

Most physical therapy practices are not computerized in their documentation. As a result, there is staff resistance to added burden imposed by a process of outcomes measurement. Although computerization is clearly not a panacea for eliminating the administrative burden of outcomes data collection, those measures and instruments with more complexity in scoring are handled with relative ease, patient specific reports may be generated in real time,<sup>24</sup> the potential for errors is eliminated or minimized, and compilation of data base information is much more systematic through less redundancy in data collection. The commercial software presently available is evolving rapidly, and combined with new hardware technology and declining prices should provide a viable solution for information systems in any practice. The use of the internet for on-line patient assessment is also growing, providing for ease in scoring more complex instruments such as the SF-36.

## WHAT OPPORTUNITIES DOES THE FUTURE PRESENT FOR OUTCOMES MANAGEMENT?

Clearly, we are only at the very beginning of understanding the process of outcomes management and incorporating results into rehabilitation and health care. The groundwork for a viable system of outcomes measurement in orthopaedic practice has been completed. There will be a gradual transition from pragmatic, paper-based data collection platforms to computerized systems that facilitate data collection, analysis, and reporting. Multiple language capabilities and voice-activated software in performance measurement systems is becoming available for patient health status and satisfaction questionnaires. Rasch analysis is being used as a method of creating scale-free measurement of patient functional ability, allowing significant item reduction and comparisons using different instruments.<sup>25</sup> With algorithms already in working models to direct questions based on patient responses and their impairments, general introduction into practice will begin in the next 3 to 5 years. Computer systems that combine patient-based generic measures, functional status measures, patient specific functional scales, clinical documentation, and billing will reduce respondent burden while greatly enhancing outcome reporting sophistication.

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# The Guide to Physical Therapist Practice: Incorporating the Preferred Practice Patterns into Orthopaedic Practice

By Diane Dalton, MS, PT, OCS

## INTRODUCTION

The *Guide to Physical Therapist Practice* is a document that describes the scope of physical therapy practice. It consists of 2 parts. Part One describes the elements of patient/client management. Part Two is a consensus-based description of patient/client management strategies related to specific diagnostic groups. The Preferred Practice Patterns are designed to be broad boundaries that may contain multiple critical pathways within them for the management of patients or clients within that diagnostic group. They are not clinical guidelines, however, they are the first step toward their development.

Once the 5 elements of patient/client management (examination, evaluation, diagnosis, prognosis, and intervention) have been incorporated into our documentation, the next step is to use the Preferred Practice Patterns. Each Practice Pattern describes the elements of examination, evaluation, and intervention generally accepted for the specific diagnostic group. Specific tests and measures are listed, as are specific interventions. Each pattern also includes anticipated goals and outcomes and an expected range of number of visits per episode of care. It is important to understand the definition of "episode of care" used in the *Guide* to better appreciate the wide range of visits often listed in the Practice Pattern. An episode of care is defined as "all patient/client management activities provided, directed, or supervised by the PT, from initial contact through discharge." This can include care given for a specific diagnosis across settings; acute care through outpatient care, for example.

The Practice Patterns are described in 4 sections: Musculoskeletal, Neuromuscular, Cardiopulmonary, and Integumentary. Generally, there is a great deal of overlap of the 5 elements of patient/client management between the Patterns, however, you will find differences if you examine them closely. Unique to the Musculoskeletal Patterns, for example, is the inclusion of primary prevention/risk factor reduction strategies for each diagnostic group. Understand-

ably, the most overlap occurs within each of the 4 categories.

The Practice Patterns are designed to facilitate a systems approach to patient/client management. That means that those of us who practice in orthopaedics cannot simply learn and use only the Musculoskeletal Patterns. For example, a patient with a peripheral nerve injury will be classified in the Neuromuscular Pattern 5D: *Impaired Motor Function and Sensory Integrity Associated with Peripheral Nerve Injury*.

The goal of the Patterns is to have a common classification system that directs our interventions. Using only the medical diagnosis often does not assist us in this regard.

## CASE STUDIES

The following case studies are examples of how you may classify a patient into a Practice Pattern. I have specifically chosen one straightforward case and one that involves a medical diagnosis that alone does not direct the physical therapist's treatment.

### Case #1

John is a 17yo male interscholastic basketball player who twisted his right ankle in a game 2 days ago. He was seen in the ER where x-rays were found to be negative for fracture. He is ambulating nonweight bearing on the right with axillary crutches. He has been applying ice and has had the ankle wrapped with an ace bandage. His PMH is unremarkable and he is not taking any medications. The medical diagnosis is right ankle sprain.

### Disability:

- Patient is unable to play basketball.

### Functional Limitations:

- Distance patient can ambulate is limited to 2 blocks in 15 minutes.
- Patient is able to ascend and descend stairs with rail and 1 crutch. He is not able to demonstrate proper technique on stairs without a rail.

### Impairments:

- Moderate edema/effusion noted on the anterior and lateral aspects of the right ankle.
- ROM: Limited AROM by pain in all directions (INV and DF greatest); PROM also limited in all directions by effusion/pain.
- Resisted isometrics relatively pain-free with only mild weakness noted.
- Anterior draw test and with mild laxity on the right.
- Palpation over the anterior talofibular ligament painful.

**Diagnosis:** Pattern 4E: *Impaired Joint Mobility, Muscle Performance, and ROM Associated with Ligament or Other Connective Tissue Disorders*; Grade II anterior talofibular ligament sprain on the right.

Pattern 4E includes sprains and strains. In the case described above, it is the ligamentous damage that will direct the course of our treatment, therefore the 4E pattern is chosen. Confusion with classification of this patient may be in identifying the primary impairment as edema/effusion which may lead one to want to place him in Pattern 4F: *Impaired Joint Mobility, Muscle Performance, and ROM Associated with Localized Inflammation*. However, if you read the description of that pattern you will notice that it was created to encompass the tendinitis/bursitis diagnostic group. With the patient with tendinitis, managing the inflammation is what directs the course of treatment.

### Case #2

Jane is a 29yo woman with c/o moderate to severe frequent HA. Her pain has had an insidious onset over the course of many months. She works as an administrative assistant. PMH is unremarkable and the patient has had an unremarkable neurological workup. The medical diagnosis is chronic HA.

### Disability:

- Patient has missed 4 days from work this month due to pain.

### Functional Limitations:

- Painful ADL and IADL and is only able to concentrate for 10 minutes without a break during HA episodes.

### Primary Impairments:

- Forward head posture with posterior cranial rotation, abducted and anteriorly tilted scapulae, increased cervical lordosis, increased upper thoracic kyphosis, and bilateral internally rotated arm hang.

### Secondary Impairments:

- Hypomobility of the following segments: O/A, C2,3, T1-3.
- Shortened suboccipital muscles, upper trapezii, cervical paravertebrals, and pectoralis minor bilaterally.
- Tenderness to palpation throughout cervical musculature, in particular the suboccipital muscles which increases the HA.
- Weakness of the posterior scapular stabilizers.

**Diagnosis:** Pattern 4B: *Impaired Posture*, leading to chronic HA.

In this case, Impaired Posture was chosen as the Practice Pattern because this is the primary impairment and our intervention will be primarily directed toward the posture and the associated impairments.

If, however, we had found the following primary impairments: (1) sensory, strength, and reflex changes indicating C6 nerve root involvement, (2) positive Neural Tension Tests, and (3) hypermobility of the following segments: C3-6 it would suggest that the HA pain was radicular in nature, and we would choose Pattern 4G: *Impaired Joint Mobility, Motor Function, Muscle Performance, ROM, or Reflex Integrity Secondary to Spinal Disorders*. This pattern is described specifically for those with spinal impairments with or without radiculopathy. In this case, our intervention would be primarily geared toward alleviating the radiculopathy and stabilizing the cervical spine. As you can see, with the 2 different sets of impairments, we have 2 very different problems with different intervention strategies, but the same medical diagnosis (HA).

### CONCLUSION

You may initially experience frustration with using the *Guide*, and in particular with using the Preferred Practice Patterns. Some patients will be easy to classify and others will not. You will

find that not every patient fits into the Patterns as they are currently described. In fact, the APTA estimates that currently only 80% of all patients we see will be able to be classified into a pattern. Please remember the *Guide to PT Practice* continues to be a work in progress. It is a first attempt at describing PT practice and a step toward a common language and classification system for our profession. Begin to use the Practice Patterns with your patients. Keep track of when the Patterns work and when they do not. Try to match the list of tests and measures and interventions with those you choose for a patient in a given pattern. Determine if the range of visits that is provided in the pattern holds true for the patients you treat. Once you have become familiar with the document and have had some experience with its use, please provide feedback to the Practice Department of the

APTA. The only way the document can be most useful is if those people using it become involved with the revision process.

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The Orthopaedic Section invites you to get involved by presenting or writing for educational purposes. If you have expertise in an area and would like to be considered as a writer or speaker, please complete the form below and fax it to the Section office at 608-788-3965. You may e-mail your ideas to: [lweaver@centuryinter.net](mailto:lweaver@centuryinter.net). Please include the information listed below.



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Thank you!

# Influences on Perception of Chronic Lower Back Pain

Jeff Bronzini

## INTRODUCTION

Chronic lower back pain (CLBP) is a common clinical diagnosis with a wide array of etiologies. Due to the complexity of the nervous system, there are an immense number of factors that can influence each individual's perception of the chronic pain, regardless of its cause. This paper focuses on 3 studies examining different neurological variables influencing pain perception. The first study searches for a link between physiological reactivity and pain severity.<sup>1</sup> The second study tests the hypothesis that a reorganization of the primary somatosensory cortex occurs in patients with CLBP.<sup>2</sup> Finally the third study examines the changes in the neurological pathways during recall of personal pain in patients with CLBP.<sup>3</sup>

The first study was based on the hypothesis that an individual under high stress has frequent and intense muscle contractions, which in this case will increase LBP through hypoxia and muscle ischemia of the lower paraspinals. Theoretically at least, there is a physiological basis for the assertion that a highly-stressed individual will experience greater pain than a relaxed individual with a similar lower back condition. The authors of the study hypothesized that individuals with inadequate emotional resources to cope with stress would show greater paraspinal reactivity. Individuals reporting depressive symptoms on a questionnaire were used as the emotionally vulnerable in the study, and paraspinal reactivity was measured through EMG recordings.

The cortical reorganization study was based on previous research showing that cortical representation of parts of the body had changed in some cases, such as shrinking of the cortical representation of an amputated limb or in expanding representation in areas where there has been extensive tactile stimulation. The experimenters thus hypothesized that cortical representation of the lower back could grow due to excessive nociceptive stimulation from that region. The resulting enlargement of the primary somatosensory cortex for the painful area would result in cortical hypersensitivity to tactile stimulation. Theoretically, this exaggerated

response should not occur in other regions of the body and should not occur with other types of stimuli to the lower back.

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Due to the complexity of the nervous system, there are an immense number of factors that can influence each individual's perception of the chronic pain, regardless of its cause.  
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The third study was based on the theory that patients with chronic pain retrieve negative and/or pain related memories more readily than pain-free individuals, especially when they are experiencing pain at the time. The experimenters, referring to the anatomical changes observed in the cortex in the previous study, hypothesized that chronic pain leads to the development of more extensive cortical networks devoted to pain. It is probable that these changes could take place not only in the primary somatosensory cortex, but also in the association cortex and the subcortical regions. These networks, if they are proven to exist, would then cause an exaggerated cortical response to personal pain memories and could even result in the actual perception of pain.

## METHODS

The participants of the stress study included 107 individuals assessed by a multidisciplinary team as suffering from benign musculoskeletal pain in the lower back. The Beck Depression Inventory (BDI) was used to evaluate the depressive symptoms at the time of the test and the Pain Severity Subscale (PSS) of the Multidimensional Pain Inventory was used to rate the pain. Heart rate and blood pressure were also monitored throughout the test. The subjects were instructed to perform 2 tasks designed

to place them under stressful conditions. In the first, the mental arithmetic task, the subjects were told to successively subtract by 7 starting from the number 4,269 for 2 minutes while the experimenter urged the subjects to perform more quickly and accurately. A 3-minute anger recall interview, in which the subjects were asked to think back to 2 recent events that elicited anger in them, was used as the second stress task. During the experiment, each individual was seated upright with the electrodes attached to the trapezium and paraspinal muscles on each side and the blood pressure cuff secured to the nondominant arm. The subject was initially instructed to relax for a 5-minute baseline period, after which the mental arithmetic task was performed for 2 minutes. Another 5-minute rest period ensued, followed by the anger recall interview for 3 minutes.

The cortical reorganization study used 10 patients with CLBP and 9 individuals to serve as healthy controls. Magnetic source imaging was used to monitor the cortical response to applied electrical pulses. A Bti Magnes Neuromagnetometer was used to record from 37 locations over the right hemisphere. Electrical pulses were applied through electrodes placed on the left lower back at the site of the worst pain and at the tip of the left index finger. For extra information, the subjects completed three scales of the West Haven-Yale Multidimensional Pain Inventory, assessing pain intensity, interference with daily activities, and affective distress. The subjects' responses were then recorded over application of pulses across seven different experimental conditions.

The study on pain-related memory used 9 patients with CLBP and 9 demographically matched control subjects. The dimensional complexity of an EEG reading was used to approximate the extent of cortical networking during a mental task. The EEG was recorded from 15 sites according to the International 10-20 system. A painful stimulus was applied to the left index finger through a Medoc thermal stimulator 0.5 C above a previously determined pain threshold. Next, the subject was given

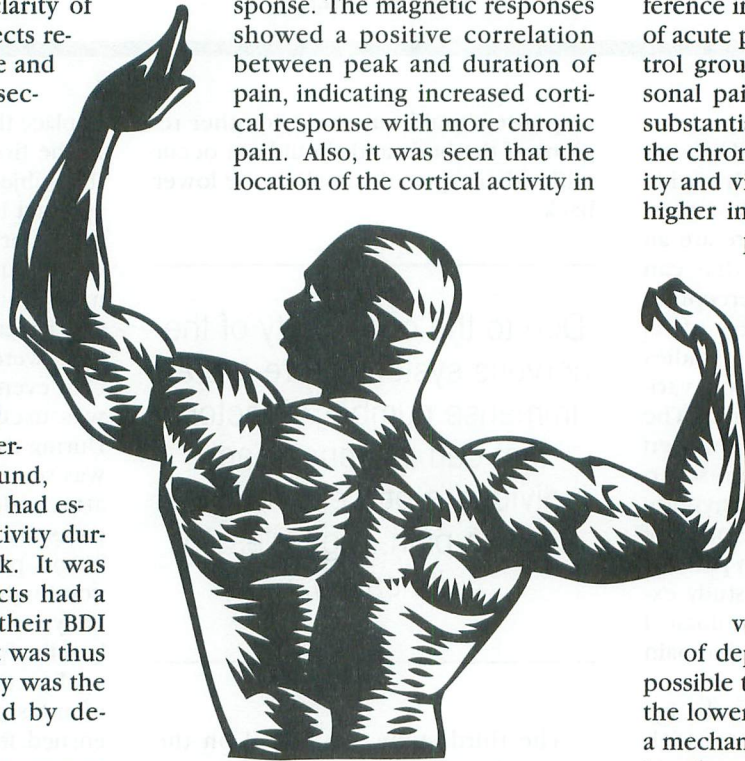
30 seconds to recall and imagine the previous stimulus as vividly as possible. The subjects then rated the intensity of the stimulus as well as the clarity of the imagery. Finally, the subjects recalled a personal pain episode and a stressful life event for 30 seconds each.

## RESULTS

The first study showed that tension in the lower paraspinals and trapezius muscles, systolic and diastolic blood pressures, and heart rate all showed substantial increase from baseline during the mental arithmetic and anger recall interview. A correlation was found, however, among subjects who had especially high paraspinal reactivity during the mental arithmetic task. It was discovered that these subjects had a strong correlation between their BDI scores and their PSS scores. It was thus found that paraspinal reactivity was the only variable to be affected by depressed affect.

The study of the somatosensory cor-

tex revealed that the electrical pulses applied to the lower back in the chronic pain group elicited a greater response. The magnetic responses showed a positive correlation between peak and duration of pain, indicating increased cortical response with more chronic pain. Also, it was seen that the location of the cortical activity in



the pain group had shifted medially in comparison to the control group.

In the third study, there was no difference in EEG complexity for the recall of acute pain between the pain and control groups. Analysis of recalling personal pain episodes, however, showed substantially higher EEG complexity in the chronic pain group. The pain severity and vividness of recall ratings were higher in the pain group for both the personal stress and personal pain recalls, but the EEG complexity only increased for the personal pain recall.

## DISCUSSION

The results of the stress study indicated that paraspinal reactivity did not directly correlate with pain perception, but rather it served to moderate the connection of increased severity of CLBP in the presence of depressive symptoms. Thus it is possible that stress induced reactions of the lower paraspinals could possibly be a mechanism by which pain perception is enhanced in patients with CLBP and

Table. Summary of Literature Reviewed

Author	N	Pt. Pop	Variable	Outcomes Measures	Methods	Results
Burns, et al	107	LBP	depressed vs. nondepressed CLBP	- EMG - BDI - PSS -HR&BP	- A five minute rest period was followed by two minutes of the mental arithmetic task, another five minutes rest, and then three minutes of the anger recall interview. Throughout the experiment, the subjects' trapezium & paraspinal activity, as well as HR & BP were recorded.	- There was a correlation between subjects who had increased paraspinal reactivity during the arithmetic task & their BDI & PSS scores. Although HR, BP, and muscle tension all increased with stress, paraspinal reactivity was the only one influenced by depressed affect.
Flor, et al	19	LBP	CLBP vs. control	- magnetic source imaging (MSI)	- 37 locations over the right hemisphere were recorded with MSI. Electrical pulses were applied to the site of worst pain on the left lower back & tip of the left index finger, given at levels between perception & pain threshold.	- Stimulation of the lower back elicited a stronger magnetic response than that of the index finger in the CLBP group. The MSI data also showed that the location of the cortical activity in this group had shifted medially in comparison to the control group.
Lutzenberger, et al	18	LBP	CLBP vs. control	- dimensional complexity of EEG	- EEG was recorded from 15 sites using the International 10-20 system. A painful stimulus was then applied to the left index finger, after which the subjects were given 30 seconds to recall the stimulus as vividly as possible. Then, the subjects recalled a personal pain episode & a stressful life event for 30 seconds each.	- There was no difference between the groups for acute pain recall. Personal pain memories, however, showed higher dimensional complexity in the CLBP group.

depression. This is not certain, however, since the correlation is only marginally significant in the mental arithmetic test and there was no statistical significance in the anger recall interview. Perhaps this was due to the fact that the mental arithmetic test was less complex and more standardized than the anger recall interview. That is to say that the interview required each subject to recall an event and clearly explain it to the experimenter, leaving room for there to be varying abilities of the subjects to do this effectively.

The findings of the somatosensory study strongly support the hypothesis of enhanced cortical reactivity as a result of chronic pain. It was observed that substantial increases in cortical activity were only observed in subjects with a greater duration of pain, and that the chronic pain group showed greater reactivity to a standard stimulus than the control group. The medial shift of the cortical representation of the back could result in it encroaching on the neighboring foot and leg areas. The experimenters made no statement as to the method of this migration, which perhaps would be a useful future study.

The third study indicated that the higher dimensional complexity shown in personally relevant pain memories could very well be due to an increased number of pain-activated cell groups. It is important to note that these networks are not activated by the sensation of pain, but rather by the thought of pain. It is speculated that the associative learning theory plays a role, as previously neutral stimuli are connected to the experience of pain. These stimuli can thus generate personal pain memories which could potentially cause the individual to experience pain in the absence of peripheral input.

Understanding these and other influencing factors in the experience of chronic pain can be instrumental in determining an appropriate treatment. In the 3 cases presented here, positive feedback loops are present in maintaining and exacerbating the lower back pain. In the first experiment, a patient with chronic pain subjected to stress can experience paraspinal reactivity, which in an individual with symptoms of depression (possibly caused by the pain itself), can result in even greater LBP. For the next experiment, prolonged CLBP resulted in a greater representation of the lower back in the somatosensory cortex, resulting in hypersensitivity for that area and thus a greater sen-

sation of pain. In the third, chronic pain resulted in the generation of more extensive cortical pain networks, which when stimulated by personal pain memories, results in the spontaneous sensation of pain. All of these loops endlessly feedback into themselves, allowing no escape from the chronic pain. It would therefore be desirable to design a treatment plan to break into the loops. Using the first experiment for an example, treating the patient's depression can modify the patient's environment in such a way that stress does not necessarily translate to LBP. For the other loops, it seems that the only way to disrupt them is to get to the source of the pain before it becomes chronic. If the underlying cause is determined in a timely fashion, the pain can be treated before any cortical restructuring occurs. This research highlights the unique nature of CLBP, and emphasizes that until more is known about the physiological changes that occur in the chronic pain state, it is of primary importance to successfully treat LBP before it becomes a chronic ailment.

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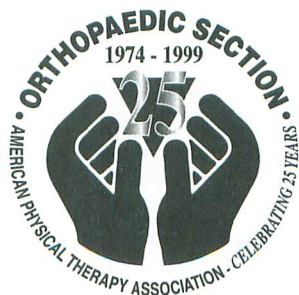
The Orthopaedic Section has accumulated a collection of information related to manual therapy/manipulative practice and legislation. The information is categorized, alphabetized, and summarized for ease of use. The *Compendium of Manual Therapy Practice and Legislative Issues* is categorized in the following areas:

- Definitions
- PT Practice Acts
- Chiropractic Practice Acts and Licensing Boards
- Position Papers - Attorney General - APTA Legislation/Lawsuit
- PT Practice of Manipulation
- Chiropractic Practice of Manipulation
- Manipulation Injuries
- Research on Efficacy of Manipulation - PT authors
- Research on Efficacy of Manipulation - other authors
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The *Compendium of Manual Therapy Practice and Legislative Issues* is available free of charge to Orthopaedic Section members from the Orthopaedic Section, APTA, (800-444-3982), APTA's Government Affairs office (800-999-2782 X 8533), and the American Academy of Orthopaedic Manual Physical Therapists (through the Institute of Physical Therapy 800-241-1027).

Please forward any information that would be helpful to other physical therapists and can be added to the compendium to: Helene Fearon and Steve McDavitt, Orthopaedic Section, 2920 East Avenue South, Suite 200, La Crosse, WI 54601. An effort to keep the database current will allow us to better serve APTA members.

Helene Fearon, PT  
Steve McDavitt, PT  
Practice Committee Chairs  
Orthopaedic Section, APTA



# Taking Care of Persons With Patellofemoral Pain is as Easy as VMO.... Or Is It?

Michael Knox, MPT

## INTRODUCTION

It is very common for someone to walk into the clinic with a diagnosis of patellofemoral syndrome (PFS) with orders for VMO (vastus medialis oblique) strengthening. The rationale is clear. In the case of PFS, the quadriceps muscle group exerts a force that is directed slightly lateral. This clearly identifies the importance of the VMO. The pull of the vastus medialis longus is approximately 15° to 18° medial to the femoral shaft with the VMO pulling 50° to 55° medially.<sup>1</sup> Therefore, the VMO is critical in providing dynamic stabilization as the patella tracks through the trochlear groove.

Cadaver studies on the function of the oblique part of the vastus medialis support this theory. One study conducted by Goh, Lee, and Bose investigated 6 normal cadaver limbs. Each limb was loaded with and without tension wires placed on each muscle belly for stimulation purposes. Results showed when the VMO was not activated, the patella displaced approximately 4 mm laterally.<sup>2</sup>

## JUST STRENGTHEN THE VMO

So there is the answer. By strengthening the VMO, normal kinematics can be restored and function is improved. Sounds simple, right? Well, not exactly. Clinically, while exercises such as hip adduction and knee extension with internal or external rotation are selected to preferentially activate the VMO, the literature offers disagreement as to whether individual components can be activated.

In 1991, Voight and Wieder compared reflex response times of VMO and VL in normal individuals and individuals with quadriceps dysfunction. A patellar tap and electromyography revealed faster responses of VMO firing in normal subjects when compared to the vastus lateralis. The reverse was shown in subjects with extensor mechanism dysfunction.<sup>3</sup> Similar results were found in 1996 when Witvrouw et al performed a study comparable to that of Voight and Wieder.<sup>4</sup> In both studies, the authors concluded that the knee pain may be a

result of an alteration in the neurophysiology or a lack of motor control.<sup>3,4</sup>

While studies like these support the idea that PFS is the result of selective inactivation between the VMO and VL, EMG studies involving exercises to elicit components of the quadriceps have not been so definitive. In 1993 Karst and Jewett studied 12 healthy adults. Using EMG analysis, variations of straight leg raising (SLR) and SLR combined with isometric hip adduction did not activate the medial components of the quadriceps any greater than quadriceps setting or SLR alone.<sup>5</sup> Similar studies examining subjects with and without PFS have yielded comparable findings.<sup>6,8</sup>

## CONCLUSION

Taking what we know about the anatomy, biomechanics, and discrepancies that exist in the literature, it would be more logical to implement a program combining both isolated movements and an overall quadriceps strengthening program. Each program should be individually tailored based on clinical presentation and specific needs of that patient. To implement this in the most functional context, closed chain exercises should be emphasized. Improving the mobility of the lateral retinacular tissue as well as enhancing muscle flexibility to aid in patellar tracking should also be addressed. To focus on the VMO, modalities such as functional electrical stimulation and biofeedback may be beneficial in improving motor learning as well.

## DISCUSSION

So, where does that leave us, the clinicians? Well, as my professors used to say (and I can still hear them believe me), "In physical therapy a lot of what we do is not black or white, it is more of a shade of gray." Those physical therapists who are problem based learning educated know exactly what I mean. That is why we as educated clinicians need to be very critical when reviewing the literature. We must always have a solid rationale for implementing any intervention and avoid falling into the "cookbook" mode.

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Michael Knox, MPT is currently affiliated with Riverview Medical Center in Red Bank, New Jersey.

## Letter to the Editor

Dear Editor:

I would like to take this opportunity to respond to Stephen McDavitt's letter in issue 11(1):99 of *Orthopaedic Practice*. I fully agree that the physical therapy profession needs to open a dialogue on the practice of joint mobilization by the PT Assistant and come to a determination as to the best solution to this "problem."

I am one of those therapists that teaches joint mobilization to PTAs (through QUEST seminars) and would like to provide my perspective on the matter. First of all, only basic (pain-free) extremity mobilizations are taught in my course. I agree 100% that any spinal mobilizations are beyond the skill level of the PTA. Emphasis in my course is placed on communication with the referring PT, indications and contraindications, joint surface anatomy, terminology, and technique. After completing the course, PTAs are better able to carry out the treatment plan of the PT, have a better appreciation of the PT's role in properly evaluating the patient, and know when to have the PT re-evaluate the patient.

I believe the introductory joint mobilization course improves patient care and puts the patient at less risk for in-

jury. Over 80% of class attendees report that they are already performing joint mobilization on their patients as taught to them by their supervising PT, but they wish to learn more theory and technique to improve on their skill level. In addition, about 20% of the attendees report that they learned some joint mobilization in their undergraduate program. I find the majority of assistants to be responsible, cognizant of their role in patient care, and eager to help their patients.

Although I earn my living in part by teaching these classes, I do resent the implication that I will "sell out my professions for my own personal monetary gain." In fact, QUEST has temporarily stopped running the joint mobilization course in order to reassess the implications to our profession. In spite of AAOMPT's strong opinion on the matter, the views of the average PT and the APTA are very mixed. Although Mr. McDavitt cites the *Guide to Physical Therapist Practice* as being "against" PTAs performing manual therapy, several state chapters of the APTA have run their own continuing education courses for PTAs on this very subject.

As to my own thoughts on the mat-

ter (since this is a dialogue), I do believe that Licensed PT Assistants can safely perform basic, pain-free extremity mobilizations on their patients after receiving proper instruction. I also agree fully with Mr. McDavitt that the higher level of critical decision making MUST be performed by the PT. Therefore, I do not believe that the problem lies in the running of continuing education courses per se, but in the lack of direction from the APTA on this subject. I cannot speak for other sponsors of continuing education courses, but I look toward the APTA for guidance in areas of practice and ethics. If the APTA ever determines that PTAs should not perform even "routine" joint mobilization, I would immediately stop offering this course without hesitation.

I would like to thank Mr. McDavitt for bringing up this sensitive subject. Amazingly, we actually agree on more aspects of this issue than not. I would like to urge all PTs to join in on this dialogue in order that we may determine the fate of our own profession.

*Sincerely yours,*  
Trudy S. Goldstein, PT  
Director, QUEST Seminars

## North American Spine Society

The North American Spine Society (NASS) is the leading multidisciplinary organization representing research scientists and caregivers in the field of spinal disorders. NASS's membership has doubled in the last 4 years to over 2,000. Sadly, physical therapy is poorly represented with only 11 physical therapists comprising less than 1% of the society.

Many therapists may wonder why membership and active participation in NASS is important to physical therapy? Foremost, NASS provides an opportunity to interact with spine specialists in the areas of orthopaedic and neurosurgery, radiology, anesthesiology, physiatry, and psychology. Clearly, this increases our exposure to new opinions and ideas.

This organization also provides us with a forum to share our valuable experiences and will solidify our role as the leaders in conservative management of spine pathology and in postsurgical rehabilitation. During the annual

meeting a panel discussion was held on conservative care for low back pain. Representatives of manipulation, back school education, exercise, and McKenzie therapy were all present. However not a single one of those individuals was a physical therapist! Is it any wonder that much of the general public and medical profession is oblivious to our skills when we are so apathetic?

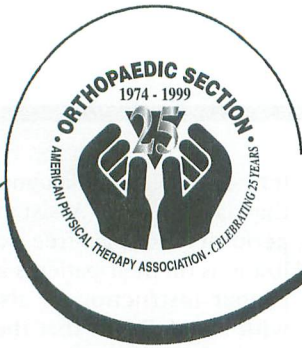
Given the present state of health care, we must be acutely aware of the privileged relationship we have had with medical physicians and have mistakenly taken for granted. If we are to ensure the survival and success of our profession, we not only need to produce meaningful outcome driven clinical research, we must align ourselves with our allopathic friends. As we enter the new millennium, we must turn our backs on the "new age" treatments often espoused by our well-meaning colleagues and root ourselves in science. Our dialog in a forum such as the North American Spine Society is tantamount to re-establishing our deserved presence in the care of

spinal disorders.

The North American Spine Society makes it very easy for physical therapists to join. Annual dues are only \$150. Membership is contingent upon completion of an application outlining your educational and employment history. You will need to write a letter explaining what membership will mean to you. Finally you will need to have 2 letters of recommendation from current members.

We strongly urge you to consider becoming a member of the North American Spine Society. For further information please feel free to contact either of us, via the contact information provided below.

Michael Reed PT, OCS aormr@aol.com ph (561) 626-0991 fax (561) 626-5181	Richard Walsh PT, OCS kiwisa@aug.com ph (904) 825-4429 fax (904) 825-2442
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## Basic Science for Animal Physical Therapists

An Independent Study Course Designed for Individual Continuing Education

### Topics and Authors

- Canine Anatomy and Biomechanics 1 • Cheryl Riegger-Krugh, ScD, PT and Darryl Millis, MS, DVM
- Canine Anatomy and Biomechanics 2 • Cheryl Riegger-Krugh, ScD, PT and Darryl Millis, MS, DVM
- Canine Anatomy and Biomechanics 3 • Cheryl Riegger-Krugh, ScD, PT and Joseph Weigel, DVM
- Equine Anatomy and Biomechanics 1 • Kevin Haussler, DVM
- Equine Anatomy and Biomechanics 2 • Kevin Haussler, DVM
- Equine Anatomy and Biomechanics 3 • Kevin Haussler, DVM

### Editorial Staff

Carolyn Wadsworth, MS, PT, CHT, OCS, Editor • David Levine, PhD, PT, Subject Matter Expert

**Course Description:** The purpose of this course is to provide physical therapy practitioners with a fundamental understanding of the anatomy and biomechanics of the dog and horse. The growing interest in the field of animal physical therapy creates a need for continuing education. Fundamental knowledge of anatomy is critical in acquiring the background needed to evaluate and treat animal patients. As this discipline develops, animals, their owners, and veterinary caregivers will benefit from the information gleaned by practitioners completing this course.

### Continuing Education Credit

30 contact hours. Completion of the six-monograph series and satisfactory performance on the post-test will give the registrant 30 contact hours of continuing education. Only the registrant named will obtain the CEUs. No exceptions will be made.

### Registration Fees

Registrations being accepted now. Course begins January 2000.

\$150 Orthopaedic Section Members • \$225 APTA Members • \$300 Non-APTA Members (WI residents add appropriate sales tax.)

\*If notification of cancellation is received in writing prior to the course, the registration fee will be refunded, less a 20% administrative fee. Absolutely no refunds will be given after the start of the course. Special discounted rates are available for institutions with multiple registrants. Call the Section office for complete details.

#### 10.1 Basic Science for Animal Physical Therapists

Name: \_\_\_\_\_, (circle one) PT, PTA, Other \_\_\_\_\_

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Fax registration and credit card number to 608/788-3965. Address additional questions to us at 1-800-444-3982 x 213.

 **APTA**  
American Physical Therapy Association



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MANUAL PHYSICAL THERAPISTS  
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**Gregory Johnson, PT**

*"Functional Mobilization<sup>TM</sup>: An Integrated  
Manual Therapy System"*

**OCTOBER 22 - 24, 1999**

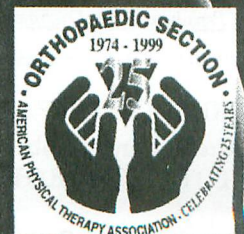
**Pre-Conferences**

**October 19 - 21**

**Post-Conferences**

**October 25-28**

**Scottsdale, Arizona**





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<b>CHECK IF:</b> <input type="checkbox"/> AAOMPT/ORTHOPAEDIC SECTION MBR <input type="checkbox"/> MANUAL THERAPY RESIDENT - MBR. <input type="checkbox"/> NON-MEMBER	<input type="checkbox"/> Check here if you are differently abled and may require accommodation in order to fully participate in this meeting. You will be contacted by AAOMPT to discuss your needs.	Check appropriate box for preferred method of confirmation: <input type="checkbox"/> Fax <input type="checkbox"/> Mail
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Conference Registration Fees (licensed physical therapists only may register for conference)	Registration Classification	Early Bird Deadline 8-22-99	Advance Deadline 9-22-99	On-Site (Subject to availability)	Amount
Registration includes instructional courses, lecture presentations, break-out sessions, luncheon, and evening receptions	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER GUEST *	<input type="checkbox"/> \$400.00 <input type="checkbox"/> \$375.00 <input type="checkbox"/> \$450.00 <input type="checkbox"/> \$ 40.00	<input type="checkbox"/> \$425.00 <input type="checkbox"/> \$400.00 <input type="checkbox"/> \$475.00 <input type="checkbox"/> \$ 40.00	<input type="checkbox"/> \$450.00 <input type="checkbox"/> \$425.00 <input type="checkbox"/> \$500.00 <input type="checkbox"/> \$ 45.00	

\*Guest registration includes evening receptions on Thursday and Saturday.

\*All fees are in US dollars.

Pre and Post Conference Seminars Oct. 19 - 21 and Oct. 25 - 28 (only licensed physical therapists may register)	Registration Classification	Tuition for Conference Attendees	Tuition for Pre or Post Conference only	Amount
<b>Ken Olson &amp; Ron Schenk: Oct. 19 - 21</b> <i>An Integrated Manual Therapy Approach to Evaluation and Treatment of the Lumbar Spine</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$350.00 <input type="checkbox"/> \$325.00 <input type="checkbox"/> \$375.00	<input type="checkbox"/> \$400.00 <input type="checkbox"/> \$375.00 <input type="checkbox"/> \$425.00	
<b>John Krauss: Oct. 20 - 21</b> <i>Functional Massage: A Norwegian Approach</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$250.00 <input type="checkbox"/> \$225.00 <input type="checkbox"/> \$300.00	<input type="checkbox"/> \$325.00 <input type="checkbox"/> \$300.00 <input type="checkbox"/> \$350.00	
<b>Wayne Rath: Oct. 20 - 21</b> <i>Mobilization with Movement - Lower Quarter</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$250.00 <input type="checkbox"/> \$225.00 <input type="checkbox"/> \$300.00	<input type="checkbox"/> \$325.00 <input type="checkbox"/> \$300.00 <input type="checkbox"/> \$350.00	
<b>Steve Allison: Oct. 21</b> <i>The Essentials of Clinical Research</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$175.00 <input type="checkbox"/> \$150.00 <input type="checkbox"/> \$225.00	<input type="checkbox"/> \$250.00 <input type="checkbox"/> \$225.00 <input type="checkbox"/> \$275.00	
<b>Wayne Rath: Oct. 25 - 26</b> <i>Mobilization with Movement - Upper Quarter</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$250.00 <input type="checkbox"/> \$225.00 <input type="checkbox"/> \$300.00	<input type="checkbox"/> \$325.00 <input type="checkbox"/> \$300.00 <input type="checkbox"/> \$350.00	
<b>Greg Johnson: Oct. 25 - 26</b> <i>Functional Mobilization<sup>TM</sup> for Lumbo-Pelvic Girdle Dysfunction</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$250.00 <input type="checkbox"/> \$225.00 <input type="checkbox"/> \$300.00	<input type="checkbox"/> \$325.00 <input type="checkbox"/> \$300.00 <input type="checkbox"/> \$350.00	
<b>**Prof. Laurie Hartman: Oct. 25 - 28</b> <i>Advanced Manual Therapy Course in Treating Spinal and Peripheral Joint Dysfunction: An Osteopathic Approach</i>	AAOMPT/ORTHO MEMBER OMPT RESIDENT/MEMBER NON-MEMBER	<input type="checkbox"/> \$420.00 <input type="checkbox"/> \$395.00 <input type="checkbox"/> \$470.00	<input type="checkbox"/> \$470.00 <input type="checkbox"/> \$445.00 <input type="checkbox"/> \$495.00	

\*\*AAOMPT Fellow or Evidence of Advanced Training in Manual Therapy

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# ACADEMY '99

## "Bringing Manual Physical Therapy into the Next Millennium"

### CONFERENCE SCHEDULE

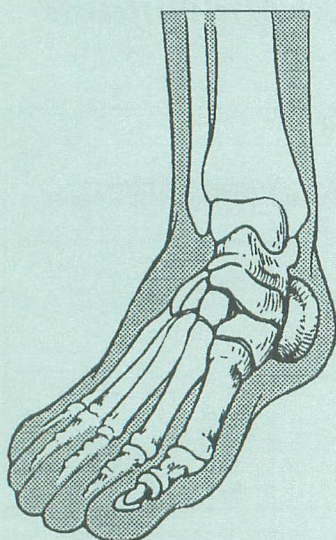
Pre and Post Conference Seminars Oct. 19-22 and Oct. 25-28

Course Code	Course Instructor: Title	Pre	Tues 19	Wed 20	Thurs 21	Post	Mon 25	Tues 26	Wed 27	Thurs 28	Tuition*	Prerequisites
A1	Ken Olson and Ron Schenk: <i>An Integrated Manual Therapy Approach to Evaluation and Treatment of the Lumbar Spine</i>										\$425	
A2	John Krauss: <i>Functional Massage: A Norwegian Approach</i>										\$350	
A3	Wayne Rath: <i>Mobilization with Movement - Lower Qtr</i>										\$350	
A4	Steve Allison: <i>The Essentials of Clinical Research</i>										\$275	
B1	Wayne Rath: <i>Mobilization with Movement - Upper Qtr</i>										\$350	
B2	Greg Johnson: <i>Functional Mobilization™ for Lumbo-Pelvic Girdle Dysfunction</i>										\$350	
B3	Prof. Laurie Hartman: <i>Advanced Manual Therapy Course in Treating Spinal and Peripheral Joint Dysfunction: An Osteopathic Approach.</i>										\$495	AAOMPT Fellow or Evidence of Advanced Training in Manual Therapy

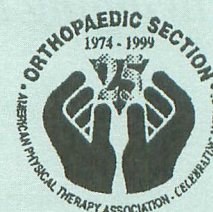
\*Please check registration form for certain tuition discounts which may apply. Tuition prices are given in US dollars.

### Conference Programming Schedule

	Thursday, Oct. 21	Friday, Oct. 22	Saturday, Oct. 23	Sunday, Oct. 24
7:00 AM	(Pre-Conference Courses)	Conference Registration	AAOMPT Committee Meetings 7:15 am - 8:15am	
7:30		<i>Functional Mobilization™ : An Integrated Manual Therapy System</i> Greg Johnson	<i>Breakout Session 1</i> Johnson, Krauss, Hartman, Allison, Sayson	<i>Research Presentations</i> Moderator -Timothy Flynn
8:00				
8:30		<i>Exhibitor Break</i>	<i>Exhibitor Break</i>	<i>Break</i>
9:00		<i>Functional Mobilization™ : An Integrated Manual Therapy System</i> (cont.)	<i>Breakout Session 2</i> Creighton, Rath, Seivert, Saliba-Johnson, Pociask	<i>Research Presentations</i> (cont.)
9:30				
10:00		<i>Academy Luncheon</i> 12:00 -1:30 All participants	<i>Lunch Break</i> 12:00 -1:00	<i>Break 12:00 -12:30</i>
10:30		<i>Modern Imaging in Spinal Pains</i> - "Clinical Correlation is Recommended" Dr. Charles Aprill	<i>Breakout Session 3</i> Johnson, Krauss, Hartman, Allison, Sayson	<i>Evaluating Diagnostic Test Data from an Evidence-Based Perspective</i> Julie Fritz
11:00				
11:30		<i>Exhibitor Break</i>	<i>Exhibitor Break</i>	<i>Question and Answers</i> Open forum all speakers
12:00 Noon		<i>Modern Imaging in Spinal Pains</i> - "Clinical Correlation is Recommended" (cont.)	<i>Breakout Session 4</i> Creighton, Rath, Seivert, Saliba-Johnson, Pociask	<i>Conference Adjourns</i>
1:30 PM				
2:00		<i>Exhibitor Break</i>	<i>AAOMPT Business Meeting</i> 4:30 - 5:30	
2:30		<i>Exhibitor Break</i>	<i>AAOMPT Business Meeting</i> 4:30 - 5:30	
3:00				
3:30		<i>"Saturday Night Out"</i> AAOMPT Reception		
4:00				
4:30				
5:00				
5:30				
7:00	<i>Opening Reception</i>			



The Orthopaedic Section, APTA, Inc.  
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**“FOOT & ANKLE DYSFUNCTION:  
Evaluation and Management of Diabetic,  
Arthritic, and Orthopaedic Disorders”**

February 1 & 2, 2000  
2000 Combined Sections Meeting \* Preconference Course  
New Orleans, LA

**COURSE OUTLINE:**

**Tuesday, February 1, 2000**

- 8:00 - 8:15 AM: Introduction
- 8:15 - 9:15 AM: Functional Anatomy of the Foot and Ankle
- 9:15 - 9:30 AM: BREAK
- 9:30 - 10:45 AM: Neurological Factors Affecting Foot and Ankle Function
- 10:45 - 12:00 PM: The Tissue Stress Model: A Basis for the Physical Examination of the Foot and Ankle
- 12:00 - 1:00 PM: LUNCH
- 1:00 - 2:00 PM: Pathomechanics Affecting the Diabetic Neuropathic Foot
- 2:00 - 2:15 PM: BREAK
- 2:15 - 3:15 PM: Evaluation of the Diabetic Foot
- 3:15 - 4:15 PM: Management Considerations for the Diabetic Foot
- 4:15 - 5:30 PM: Case Study - Neuropathic Diabetic Patient

**Wednesday, February 2, 2000**

- 8:00 - 9:00 AM: Factors Contributing to Orthopaedic & Sports Foot and Ankle Problems
- 9:00 - 9:15 AM: BREAK
- 9:15 - 10:15 AM: Evaluation of Orthopaedic & Sports Related Foot and Ankle Problems
- 10:15 - 11:15 AM: Management of Common Orthopaedic & Sports Related Injuries Affecting the Foot and Ankle
- 11:15 - 12:30 PM: Foot Orthoses: Design and Effectiveness
- 12:30 - 1:30 PM: LUNCH
- 1:30 - 2:30 PM: Pathomechanics Affecting the Rheumatoid Foot
- 2:30 - 3:15 PM: Evaluation of the Rheumatoid Foot
- 3:15 - 3:30 PM: BREAK
- 3:30 - 5:00 PM: Management Considerations for the Rheumatoid Foot
- 5:00 - 5:15 PM: Course Summary & Evaluations

**SPEAKERS:**

Susan Appling, MS, PT, OCS  
Joe Shrader, PT, CPed

Michael Mueller, PhD, PT  
Jim Birke, PhD, PT

Gary Hunt, MS, PT, OCS  
Tom McPoil, PhD, PT, ATC

**TUITION:**

	Early Bird (prior to 12/10/99)	Advanced (prior to 1/07/99)	On-Site
Orthopaedic Section PT Members:	\$200.00	\$250.00	\$275.00
Orthopaedic Section PTA Members:	\$175.00	\$225.00	\$250.00
APTA PT Members:	\$255.00	\$305.00	\$330.00
APTA PTA Members:	\$215.00	\$265.00	\$290.00
Non-APTA Members:	\$275.00	\$325.00	\$350.00
Orthopaedic Section Student Members:	\$ 75.00	\$125.00	\$150.00
Student Non-Members:	\$ 90.00	\$140.00	\$165.00

**How to Register:** Contact APTA's Service Center at 800/999-2782 x 3395 for details on registering.  
**Questions about the course?** Contact Tara Fredrickson at the Orthopaedic Section office: 800/444-3982.



# Clinical Orthopaedics

Christopher G. Scott, BS, PTA, CSCS

This column is geared toward the physical therapist assistant and is being coordinated by Gary Shankman, OPA-C, PTA, ATC.

Often, as physical therapist assistants, we are trained to be procedural experts. We have extensive training in modalities and basic therapeutic exercise. However, since we can't evaluate a patient, our assessment skills and advanced therapeutic exercise techniques are often overlooked. In my experience, the most difficult obstacle to overcome for the physical therapist assistant is viewing the entire picture. As clinicians trained heavily in modalities, we are very focused on the area we are treating. But, we are also interacting with the patients on a day-to-day basis and administering their exercise program and reporting our findings to the physical therapist.

As an educator, I try to teach my students to view the "entire picture" in regards to the patient. I explain that focusing only on the dysfunction results in not getting an accurate description of the true dysfunction. Further, I try to train our students in a comprehensive clinical decision making process. I utilize a clinical decision making process chart developed by Muscatello, Pugliese, and Taylor.<sup>1</sup> This chart begins at the top, and continues downward, with *Handicap*, *Disability*, *Functional Limitation*, *Regional Impairments*, *Tissue Level Impairments*, and culminates with *Etiology of Tissue Disturbance*. This chart regresses like a computer flow chart. Whether the form is actually filled out or thought out in the clinician's head, it promotes justifiable clinical decision-making. What I mean by justifiable clinical decision-making, is that the clinical decision is defensible. For example, in a patient with ankle pathology we begin at the top of the chart. The patient's *Handicap* is that he can't perform 60% of his job, he has no recreational activities, and he is unable to shop. If we move down a level, to *Disability*, we find that he has only limited standing ability, he is unable to ambulate stairs reciprocally, and he has limited ambulation. As we progress to *Functional Limitation* we find that his walking ability is about 45', he can ascend

and descend a shortened step, weight bear approximately 45%, and he has a noticeable gait deviation. Further progression down the chart to *Regional Impairments* we see that there is increased swelling (1¼" on the left), there is decreased joint play, decreased range of motion at the ankle in dorsiflexion and inversion, and pain with weightbearing. In addition, he abnormally pronates during ambulation. When we step down to *Tissue Level Impairments*, we see that he has a tight posterior capsule, extracellular edema, gastroc muscle tightness, and decreased articular cartilage load tolerance. Finally, as we review the *Etiology*, we see that prolonged immobilization and abnormal pronation, possibly due to the decreased dorsiflexion, are probably the cause.

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In my experience, the most difficult obstacle to overcome for the physical therapist assistant is viewing the entire picture.

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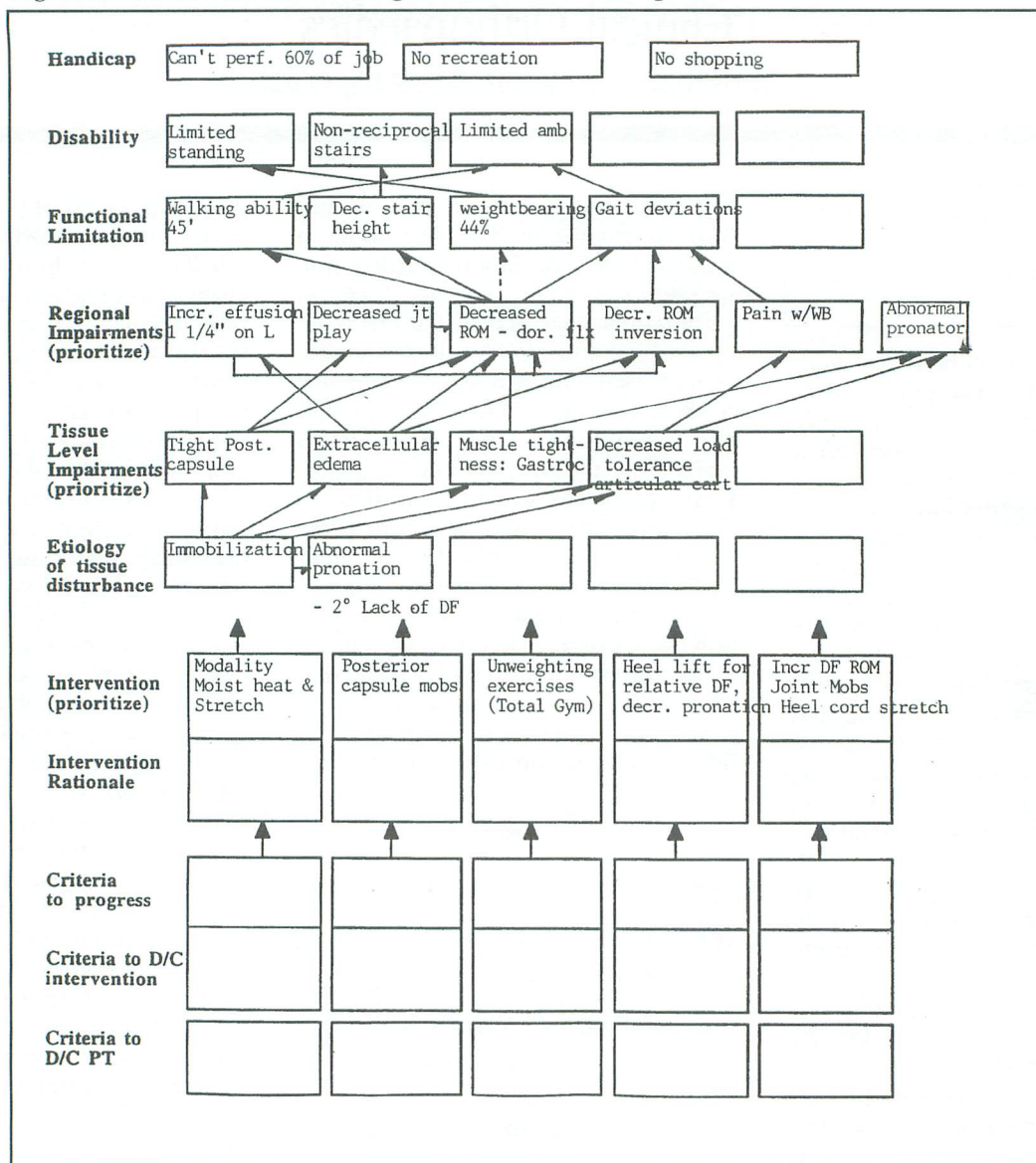
As you read this you probably think, how do I think of all this at one time? It takes practice. The purpose of looking at things with this perspective is to rationalize our treatment interventions. If you look at the above scenario and descriptions, you probably see that due to his pain and tightness from immobilization, modalities, such as moist heat, are indicated to help with pain and promote relaxation to facilitate a stretch to the gastrocnemius. We also see that posterior joint mobilizations are indicated, as well as unweighting exercises, such as can be done in a gravity reduced or eliminated position. These exercises can be performed in a pool or on equipment such as a Total Gym®. Further, it is possible that a heel lift that would allow relative dorsiflexion thereby possibly decreasing their pronation. To explain this concept, the patient has 0° of dorsiflexion. If the patient is given a heel lift that

puts them in 15° of plantarflexion, they have gained, relatively, 15° of dorsiflexion. This may help to correct their mechanical dysfunction of excessive pronation. This is given as a temporary measure until the heel cord can be sufficiently stretched. Lastly, we can see that this patient needs to increase dorsiflexion with heel cord stretch and joint mobs, as mentioned earlier.

So, what is my point, you say. I am a physical therapist assistant, what was previously mentioned is the physical therapist's job. If you ask me, that is wrong. It is EVERYONE'S job to insure that the patient is getting better. That means treating the patient with effective techniques. And, how else do you know if what you are doing is effective, if you can't determine that you have a logical intervention? Often in our fast-paced rehab world the assistant is faced with the day to day treatment of the patient. When the therapist asks you how they are doing, you want to be able to respond in an insightful, intelligent, and accurate manner. If you say, "I don't think this treatment is working that well and maybe we could try this treatment," you probably gained the respect of that therapist and helped that patient, even if your idea was not what that therapist had in mind.

As you have now been presented with a different perspective with which to view your patient, consider a patient with lateral epicondylitis. The mistake that is often made when treating a patient with this disorder is to focus only upon the lateral epicondyle. The patient is instructed to stretch the lateral aspect of the forearm, the common origin for the wrist extensors, and strengthen the medial aspect of the forearm, the common origin for the wrist flexors, in an attempt to correct the muscle imbalance of the forearm. The patient performs active inhibition techniques, in the subacute or chronic state. The patient begins with the elbow extended and forearm pronated. While holding this position, he or she performs ulnar deviation at the wrist and flexes the wrist and fingers. Pain should not increase; just a stretching sensation should be felt.<sup>2</sup> Hold-relax techniques may also be used. In hold-relax procedure, the patient per-

Organizational Chart for Documenting Clinical Decision Making Process



forms an end-range isometric contraction of the tight muscle before it is passively lengthened. The rationale behind this technique is that, after a prestretch contraction of the tight muscle, that same muscle will relax as a result of autogenic inhibition and therefore may be more easily lengthened.<sup>3</sup> These stretches and exercises are performed in conjunction with some pain relieving modalities, when indicated. These may include ice massage, phonophoresis or iontophoresis, and electrical stimulation. Further, some clinicians feel that cross-friction massage may help develop a more mobile scar by attempting to realign newly produced collagen.<sup>3</sup>

However, the *Etiology* of the problem must be determined. More often than not it is improper upper extremity mechanics due to poor scapular stabilizers,

coupled with overuse of the extensor group. Knowing this, treatment must not only address the inflammation and tightness/weakness at the lateral epicondyle, but must also address the accompanying scapular weakness. If the treatment fails to address the mechanics and focuses only on the region in question, the patient may get better, but will probably return with the same problem.

What seems to work best is a multi-dimensional treatment approach. The patient is initially treated with modalities and stretching to lateral epicondyle. Treating the patient with hold-relax techniques appears to work very well. The patient will also perform some light, eccentric wrist extension. These eccentric exercises are performed with the patient's forearm stabilized on a table.

The patient passively moves their wrist into extension and then allows gravity to pull the wrist into flexion. The exercise is performed initially with no weight and then slowly progressed within the patient's tolerance. Because eccentric muscle actions recruit less motor units than concentric muscle actions with the same resistance,<sup>4</sup> the activity can be done with little aggravation to an already inflamed region. At the same time, the exercises may help to slow strength losses. Further, the muscle pumping action is essential to help clear the metabolites produced from the inflammation at the musculotendinous junction. The exercise prescription should include high repetitions to facilitate increased endurance, as in an overuse injury, fatigue usually plays a role.

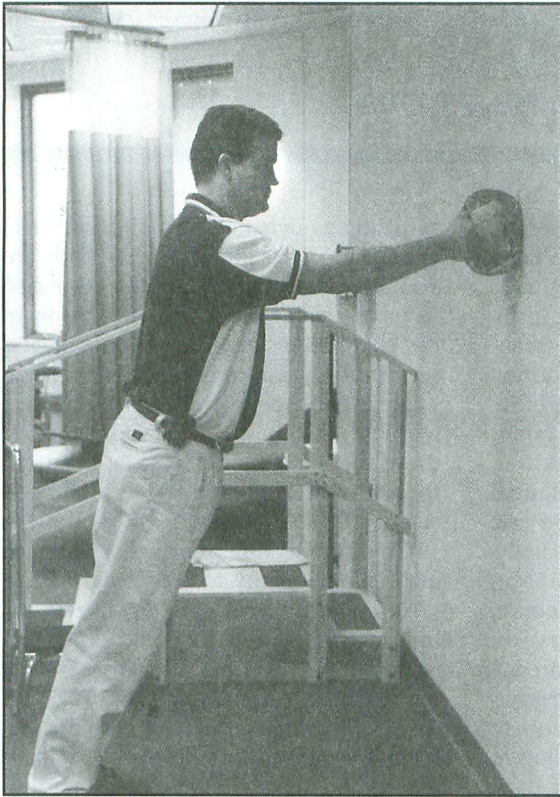


Figure 1. Serratus punch into ball—start.

The patient then begins a scapular stabilization program. This consists of traditional exercises such as retractions (rows), serratus punches, and shrugs. The patient also will perform exercises that work middle and lower trapezius in prone (similar to the manual muscle test). The patient also performs pectoralis major stretches to help improve posture. In addition to the exercises above, the patient performs more dynamic exercises such as serratus punches into a slightly deflated ball standing against a wall (Figure 1). This facilitates scapular control and adds a proprioception component. Serratus punches can also be performed in a modified push-up position on a BAPS board (Figure 2) to achieve a similar effect. As with the eccentric exercises mentioned previously, endurance training is important and as such, repetitions should be kept high. Upper extremity bike is also very useful in helping to promote upper body endurance. Muscular endurance training consists of submaximal muscle contractions extended over a large number of repetitions with little recovery allowed between each "set." Therefore, the relative intensity is very low and the overall training volume is very high.<sup>6</sup>

The rationale, for the scapular exercises and the endurance training, is based on the *Etiology* described above.

That is, the mechanism for injury is facilitated by poor scapular mechanics. If the upper extremity stabilizers are weak or fatigued, the proper technique at the wrist is compromised. As a result, the wrist extensors must do more work than they have the capability to perform. In a repetitive motion activity, the origin of the wrist extensor group has no chance to rest because the muscles "up-the-chain" can not sustain proper positioning and the bulk of the load falls to the extensors.

We often discuss the ankle in such terms as viewing the entire chain of activity, but we frequently overlook the same principle in the upper extremity. Hopefully, this article has presented some ideas for treating any dysfunction with a "flow-chart," critical thinking, decision-making mentality. I believe, if we apply the process mentioned in the begin-

ning of this article to all our patients, in conjunction with the physical therapist, the patients will ultimately benefit. In addition, I hope that I provided some new or different perspectives in treating lateral epicondylitis.

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Christopher G. Scott, BS, PTA, CSCS is Academic Coordinator of Clinical Education at Washington State Community College in Marietta, Ohio.

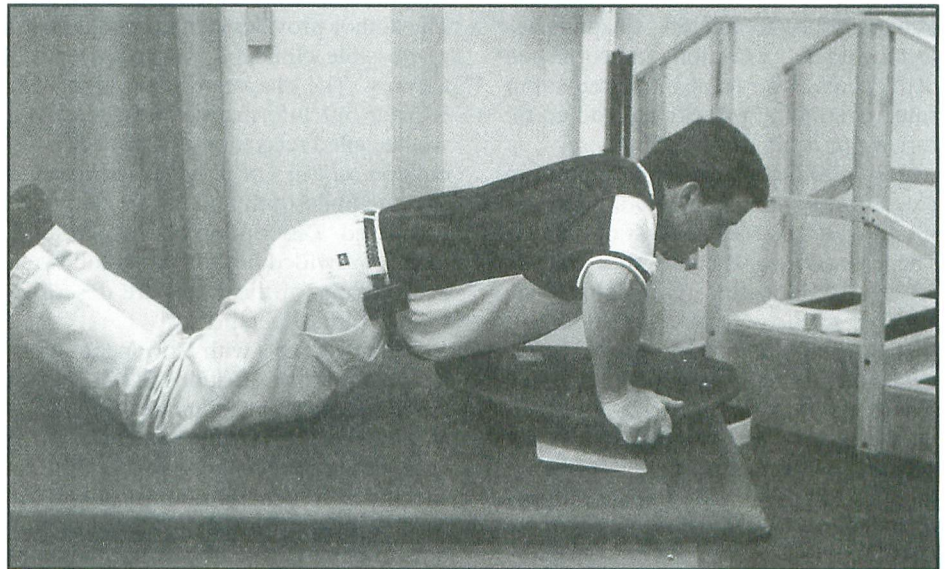


Figure 2. BAPS push-up—start.

# Abstracts and Book Reviews

Coordinated by Michael J. Wooden, MS, PT, OCS

## BOOK REVIEWS

Davis C. *Complementary Therapies in Rehabilitation: Holistic Approaches for Prevention and Wellness*. Thorofare, NJ: SLACK Incorporated. 1997; 296 pp., soft-cover, illus.

*Complementary Therapies in Rehabilitation* is a compilation of a variety of nontraditional, alternative approaches and treatments currently being used by some physical therapists as an adjunct to traditional approaches. The main theme of the text is to discuss the apparent paradigm shift toward holism and alternative therapies to augment traditional western medicine approaches.

The text is organized into 5 main sections. Within each section a main classification of alternative therapy is discussed based on the common mode or rationale of similar approaches. The chapters of each section describe: how the approach or technique was created, provide the philosophy behind the method, explain possible effects on whole person, and give sample treatments and possible applications for integrated treatment with traditional physical therapy approaches. Several chapters include cast studies to illustrate particular treatments. Chapters also include reference sections and correspondent addresses for those interested in pursuing continuing educational and certification opportunities.

The introduction and first chapter provide an important framework and mind set on which to read the rest of the text. The introduction discusses the evolution of western, allopathic, reductionistic ideology of medicine and contrasts it with holistic, complementary approaches to medicine and healing. Operational definitions are provided and necessary due to the variety of terms commonly used. The author also presents some interesting theories from the field of quantum physics to open the readers mind as to the possibilities of matter viewed as dynamic versus static existence. This introduction does not bash allopathic approaches but points out their limitations and calls for more integrated holistic health care practice.

The first chapter presents the emerging field of Psychoneuroimmunology. This chapter illustrates the continual dialogue

between the "mind," the nervous system, and the immune system and how emotional states can effect the body. Included in this discussion is how holistic principles can be applied in health care today. There are several references described that demonstrate the current wave of interest in researching alternative therapies with reductionistic research methods.

The first section is entitled Manual Therapies. Included in this section are: Myofascial Release, Rosen Method Bodywork, Rolfing, Hollerwork, SOMA, and Non Contact Therapeutic Touch. This section deals primarily with variations on myofascial manipulation and the integration of mind interactions and their expression in fascial change. The chapters are well written and help the reader delineate between purpose and method of each approach described. Most of this section is well referenced but with few research-based articles. The chapter on Non Contact Therapeutic touch is well referenced with research articles related to wound healing and pain studies.

Section 2 discusses Mind Body Interventions. Included chapters are Biofeedback, Yoga, and T'ai Chi. The Biofeedback chapter is well presented and referenced. The author provides a comprehensive list of possible clinical applications of this therapy. The chapter dealing with Yoga is brief but informative and presents a well-detailed relaxation exercise. The discussion on T'ai Chi provides background into the philosophy and history on which it is based. Description of one particular form is provided but not easily followed. Progressions of the forms are described from a clinical perspective.

Section 3 deals with Movement Awareness approaches. Included in this section are the Alexander Technique, Feldenkrais Method, and the Trager approach. Each chapter describes the founders of the respective methods and samples of application of these approaches. The terminology unique to these movement therapies was well defined.

Section 4 presents Traditional Chinese Medicine including: Acupuncture, Polarity, Reflexology and Touch for Health, Jin Shin Do, and Subtle Energy Manipulation. The chapters primarily deal with the concept of Qi and the flow of Qi throughout the body. The concepts and philosophy of Yin

and Yang as dynamic forces of universal energy and their impact on the body are also presented. The techniques described focus on freeing blockages of Qi. Most of the chapters discuss the philosophy and terminology of their respective techniques. These chapters were the hardest to follow and comprehend. Discussion of these methods appears difficult outside the cultural context from which they came.

The final section briefly discusses the use of Homeopathy and Physical Therapy.

Overall the text is well organized and informative. The variety of complementary therapies is comprehensive. One of the strengths of the book is how it assists the reader in being more open to the creative aspect of their profession and to understand the need for intent of purpose when working with patients. Additionally, the text helps us to appreciate the impact of emotional, mental, and spiritual aspects on the physical body. This text is a starting point to open discussion and debate as to the mechanisms of healing and how as therapists we can best treat our patients as whole persons.

One of the difficulties in writing about these techniques in this text is many of these methods are experiential in nature and written descriptions are found wanting. As was discussed throughout the various chapters, reductionistic research methodology must be used to validate what many practitioners believe to be true.

This is a recommended text for physical therapists who work with patients with chronic pain and for those who are open to alternative therapies and wish to understand more before committing to one particular approach. This may be an appropriate text for senior or graduate physical therapy students studying alternative or holistic approaches. This text is not recommended those who are looking for validated critical review of complementary therapies or for those interested in a detailed presentation of one of the particular therapies presented.

*Timothy J. McMahon, MPT, OCS*



Brooks-Scott S. *Handbook of Mobilization in the Management of Children with Neurologic Disorders*. Butterworth-Heinemann; 1999, 100 pp. softcover, illus.

The purpose of this book is to introduce the reader to a system approach to treatment of movement disorders in children with neurologic involvement. A specific emphasis is placed on the use of joint mobilization as a therapeutic intervention for movement disorders. Various causes of motor impairment are discussed and guidance is provided to incorporate both orthopedic and neurologic approaches to therapeutic intervention.

The book contains 7 chapters. Chapter 1 describes the early transition from use of orthopedic-based therapy to use of traditional neurologic-based strategies to improve motor control in patients with neurologic disorders. Chapter 2 focuses on current theories of motor control, which include feedback and feed-forward systems, motor programs, and dynamic systems of motor control. Chapter 3 explains the impact of biomechanics and musculoskeletal development on motor control. Chapter 4 provides information on the principles of joint mobilization and instructions on mobilizing various joints in the spine and limbs. This chapter is designed to be the keystone of the text, with other chapters written to address the benefits of mobilization techniques to treat musculoskeletal causes of motor impairment. Chapter 5 provides guidance on assessment of areas other than the nervous system to examine for motor dysfunction, namely the muscular and skeletal systems, physical and social environment, and the task itself. Chapter 6 provides patient case examples of the assessment, treatment, and outcome of 7 children with motor impairment, 3 of whom receive joint mobilization as a therapeutic intervention. Chapter 7 addresses the issues of medical efficiency and fiscal responsibility when making decisions related to the initiation, duration, and termination of services. Consistent case examples are used in each chapter to illustrate main points.

This text succeeds in presenting a multisystem approach to the examination and treatment of motor dysfunction in children with neurologic disorders. Although the name of the text implies a primary focus on mobilization techniques, I found the content to be much broader in scope. In addition to explaining the principles behind and application of joint mobilization techniques, emphasis is placed on selecting treatment options based on limi-

tations found in one or more areas including the neurological, skeletal, and muscular systems. Descriptions of traditional and current theories of motor control are provided along with explanations of the influence of biomechanics and musculoskeletal development on motor control. Case examples of patients are presented that guide the reader through decisions that help to: (1) determine patient candidacy for therapy services, (2) examine various systems for limitations, (3) select appropriate intervention strategies, and (4) decide upon criteria for discontinuation of services. Finally, the last chapter presents parameters to guide decisions regarding the frequency, duration, and discontinuation of therapy.

Limitations of the text are primarily related to the chapter on mobilization techniques. First, pictures using both a skeleton and a child are presented to enhance visualization of appropriate hand placement. However, the side of the body used to depict hand placement on the skeleton and child for each technique is not consistent, which serves to diminish interpretation. The position of the child in Figure 4-11B obscures visualization of hand placement, and the written description of hand placement is consistent with the photograph in Figure 4-9. Finally, there are some discrepancies in the information provided for the technique and purpose of mobilizations to the forearm and wrist (Figure 4-13 and Figure 4-15, respectively).

This text provides an integrative approach to the management of children with neurologic disorders, emphasizing the impact of musculoskeletal limitations on neurologic dysfunction. Clinicians will benefit from this text to review both neurologic theories of motor control and indications/benefits of joint mobilization to enhance functional movement in children with motor dysfunction. However, the reader should be aware of the limitations associated with the chapter presenting mobilization techniques. Familiarity with principles and techniques of joint mobilization will enable the reader to make appropriate interpretations of the information presented.

*Brenda Boucher, PhD, PT, CHT*

#### SOFTWARE REVIEW

Leach RE. 1998 24th Annual Meeting for the American Orthopaedic Society for Sports Medicine. Newton. MA 02460-1639, Silver Platter Education, Inc.; 1998. System Requirements for Macintosh: 16 MB RAM, System 7.1 or later, double-speed CD-ROM player, 640 x 480 display with

thousands of colors, standard Mac sound. System Requirements for Windows PC: 16 MB RAM Microsoft Windows 95, hard disk with 8 MB free space, double-speed CD-ROM player, 640 x 480 display with thousands of colors, Multimedia PC standard sound board with speakers.

The American Orthopaedic Society for Sports Medicine held its 24th Annual Meeting in Vancouver, British Columbia, Canada in July 1998. Sixty original scientific research and current concept presentations from the Meeting are available on a CD-ROM, which is edited by Robert E. Leach, MD, editor of the *American Journal of Sports Medicine*.

The program is a collection of presentations divided into the following categories: knee, anterior cruciate ligament, anterior cruciate ligament reconstruction, meniscus, posterior cruciate ligament, ankle, shoulder, miscellaneous, and current concepts. Of the 60 presentations, over half deal with the knee. Program installation is quick and you are able to navigate through the program easily at your own pace. The presentations include excellent slide images, 9 hours of original audio narration by the presenters, and fully searchable transcripts. A carousel feature allows slides and images to be resequenced based upon personal preferences and a snapshot feature allows images to be printed. Also included is a self-assessment quiz that is worth 9 hours of Category I CME credit through the American Orthopaedic Society for Sports Medicine.

While it appears that much of this program is geared toward orthopedic surgeons, several of the presentations relate directly to physical therapy. For example, papers titled "Neuromuscular Function Changes with ACL Functional Brace Use," "Effect of Neuromuscular Training on Serious Knee Injury in Female Athletes," "Ankle Taping vs. Ankle Bracing: Prevention of Ankle Injuries," and "Quality of Life Measurement Tool for Shoulder Instability" provide valuable information that can assist in the evaluation and treatment of athletes. Many of the presentations deal with knee and shoulder surgeries; these are of benefit to physical therapists because a knowledge of these procedures will facilitate treatment planning as well as an understanding of expected long-term outcome. This program, which offers the most recent findings in sports medicine research, is highly recommended for orthopedic and sports physical therapists.

*Michael Ross, MEd, PT, OCS*

## APTA Vision: Year 2020

A group of Association members looked into a crystal ball and developed a vision statement for our profession. Members had a number of opportunities to respond to the Draft Vision. We are giving you the same opportunity. Please send your opinions via e-mail to Bill Boissonnault at wg.boissonnault@hosp.wisc.edu. You may also want to contact your Component President or Chief Delegate. The Section's Animal Physical Therapist SIG is interested in member input related to the inclusion of animals in the Vision Statement. One of the primary areas of discussion was the inclusion of animals in the statement and we are interested in feedback specific to this issue. We will pass your opinions on to the APTA BOD.

### APTA VISION STATEMENT FOR PHYSICAL THERAPY 2020

Physical therapy is recognized by consumers and other health care providers as the preferred choice for the prevention and treatment of impairment, functional limitation, and disability related to the neuromusculoskeletal system. Through innovative approaches to care and evidence-based practice, the physical therapy profession significantly reduces the consequences of illness and injury, promotes access to health care, exerts global leadership, and shapes health policy worldwide.

Physical therapy is provided exclusively by doctors of physical therapy who are primary clinical care practitioners and who may be assisted by physical therapist assistants. These professionals and paraprofessionals render services throughout the continuum of care and advocate for the enhancement of function and improved quality of life for all segments of society. Physical therapists provide diagnosis, management, and prevention and wellness services in a variety of settings, and are members of a client's chosen health network. They provide services throughout an episode of care, work in collaborative relationships, and refer and delegate to other health and medical providers.

Physical therapists and physical therapist assistants are guided by integrity, personal responsibility, a commitment to life-long learning, and the recognition of the inherent rights of all to appropriate and affordable health programs. They provide compassionate, culturally-sensitive care characterized by trust, respect, and an appreciation for individual differences.

### APTA VISION SENTENCE FOR PHYSICAL THERAPY 2020

The doctor of physical therapy is a primary clinical care practitioner who is the recognized expert in the diagnosis and management of neuromusculoskeletal function for humans and animals across the continuum of care.

#### Questions:

1. Do you agree with the overall message that the Vision Statement and Sentence are conveying? Please explain.
2. Are there components of practice or issues that are not included in the Vision Statement/Sentence that you believe should be added? Please explain.
3. Are there components of the Vision Statement/Sentence that should be eliminated? Please explain.
4. Please add any other comments you may have.

## Section Members in the News

Congratulations Terry Randall, MS, PT, OCS, ATC. Terry was recently appointed to the APTA Advisory Panel of Public Relations. Terry is currently the Public Relations Chair for the Orthopaedic Section.



Congratulations to Bill Boissonnault, MS, PT, DPT, President, for receiving his postprofessional DPT from the University of St. Augustine for Health Sciences.



Congratulations Mark Amundson, MA, PT, SCS, ATC, CSCS. Mark was recently appointed by the American Physical Therapy Association as Federal Affairs Liaison for New Jersey. Appointed individuals will carry 2 important functions: to provide input from the grassroots membership of the component to APTA's Federal Government Affairs Committee, and to disseminate information from APTA's Board of Directors, Federal Government Affairs Committee, and staff to the grassroots members. The creation of the position demonstrates APTA's new direction —the promotion and expansion of the member involvement in the development of federal government policy.



Congratulations Susan Appling, MS, PT, OCS. Susan received the Student Government Association Executive Council Excellence in Teaching Award at the University of Tennessee, Memphis.



Congratulations Christine Annette Misora, SPT!  
Christine was recently named the 1999 Outstanding Physical Therapist Student Award by the American Physical Therapy Association.



Congratulations to the 1999 Slate of Candidates that were elected to APTA positions:  
Fran Welk, PT, MEd - Treasurer  
Janet Bezner, PhD, PT - Board of Director  
Pamela A. Duffy, PT - Speaker



Congratulations to the following Section members who were honored recipients of APTA awards:  
Lynn Lippert, MS, PT - FA Davis Award for Outstanding Physical Therapist Assistant Educator

Nichole Leigh Butts, Eunice Gong, Mark Jackson, Lisa Machado, and Christine A. Misora - Mary McMillian Scholarship Awards in the category of Physical Therapy Professional Education Programs

Peter Edgelow, MS, PT - Henry O. and Florence P. Kendall Practice Award

Charles Dorando, PT and Patricia McAdoo, PT, Med, CHES - Lucy Blair Service Awards

Daniel L. Riddle, PhD, PT - Chattanooga Research Award

Joseph S. Rogers, PT - Dorothy Briggs Memorial Scientific Inquiry Award in the Physical Therapy Professional Education Category

Julie M. Fritz, PhD, PT, ATC - Dorothy Briggs Memorial Scientific Inquiry Award in the Postprofessional Doctoral Category

Barbara J. Norton, PhD, PT - Golden Pen Award

Nancy J. Zimny, PT - Jack Walker Award

# SME Board of Directors Meeting Minutes

June 4, 1999  
Washington, D.C.  
Minutes  
(6/4/99)

The SME Board of Directors Meeting was called to order at the Renaissance Hotel in Washington D.C. at 7:30 AM on Friday, June 4, 1999 by President Bill Boissonnault.

## ROLL CALL:

### Present:

Bill Boissonnault, President  
Nancy White, Vice President  
Ann Grove, Treasurer  
Joe Farrell, Director  
Gary Smith, Director  
Paul Howard, Education Vice-Chair  
Susan Appling, *OP* Editor  
Phil McClure, Research Chair  
Steve McDavitt, Practice Co-Chair  
Tara Fredrickson, Executive Assistant  
Dorothy Santi, Immediate Past Treasurer  
LaVerne Gurske, HSC Coordinator  
Linda Weaver, Executive Secretary

### Absent:

Lola Rosenbaum, Education Chair  
Terri DeFlorian, Executive Director  
Helene Fearon, Practice Co-Chair  
Fran Welk, APTA Board Liaison

## MEETING SUMMARY:

The agenda for the SME Board of Directors meeting on June 4, 1999 was approved as printed. **=PASSED=**

The minutes from the February 5, 1999 CSM Board of Directors meeting in Seattle, Washington were approved by the Board as printed. **=PASSED=**

**=MOTION 1=** A Patellofemoral Roundtable chaired by Chris Powers, PhD, PT will be scheduled for the New Orleans CSM in 2000. This roundtable is tentatively scheduled for 3 hours on Sunday morning. **=PASSED=**

#### Fiscal Implications:

\$900 for speaker costs  
\$470 travel for one person  
\$195 per diem for one person for one day

**=MOTION 2=** Charge the Finance Committee, working with Susan Appling, to develop a financial plan for *OP* to be presented to the BOD at our Fall 1999 meeting. This task force should consider whether budget neutral is feasible/desir-

able or not, can it be accomplished (or to what degree) without compromising the quality of *OP*, methods to make *OP* budget neutral or as close to it as possible. The proposed plan should contain short-term actions that would be reflected in the budget for 2000 and long-term plans to be reflected in future budgets. The task force would be encouraged to contact other magazines and/or contact Allen Press, Inc., the publisher for *JOSPT*, for suggestions and ideas. **=PASSED=**

**=MOTION 3=** The Awards Committee recommends that the recipient of the Gould Award receive a plaque or framed certificate, a monetary award consistent with the Rose Award, and recognition at the Orthopaedic Section's Awards Ceremony. **=PASSED=**

#### Fiscal Implications:

Mounted Certificate \$ 50.00  
Honorarium \$500.00

**=MOTION 4=** The Advisory Council for *OP* is made up of the Research Chair, Practice Chair, one elected officer from the Board, one representative from each SIG, one PT Section member, and one PTA Section member appointed by the Editor. **=PASSED=**

SS: The Advisory Council for *Orthopaedic Physical Therapy Practice* was created at CSM in 1995. It was established to assist the Editor with subject matter review and to provide guidance with regard to direction and content of *OP*. The current policy specifies that a Director be appointed to the Council. Since I have been Editor, the Board representative has been the Treasurer, rather than a Director. Also, the Home Study Course Editor is included on the Council. This position requires a significant time commitment already. I agree with the current HSC Editor in that that person does not need to serve on the *OP* Advisory Council. In addition, I would like to formally include a PTA Section member on the Council. Gary Shankman has served on the Advisory Council for several years and has been responsible for providing or submitting articles targeted for PTAs.

**=MOTION 5=** The Orthopaedic Section will automatically block out hotel rooms for Board and Committee Chairs at the hotel that we are meeting at for

CSM and Annual Conference. **=PASSED=**  
SS: Convenience and ease of getting together with Board and Committee members.

**=MOTION 6=** Award Ceremony Policy: The recognition of outgoing and incoming board members and recognition of all education and research award recipients will be done at one CSM event called Orthopaedic Section Award Ceremony. The event will be one hour in length. The Paris Distinguished Service Award recipient will be the last presentation of the hour. (Allow five minutes for the presentation and 20 minutes for the lecture.) (Organizational note- ask all the award recipients and board members being recognized to sit in the front row until they have received recognition.)

Black Tie and Roses Reception: This reception will immediately follow the Award Ceremony. Approximately 20 minutes into the reception the Steve Rose video will be played followed by a brief recognition of the Rose Excellence in Research recipient.

Rose Excellence in Research Platform: The platform will be 30 minutes in length and scheduled unopposed to other platform times. Advertising regarding the time and location must be done to those in the research community who may be interested in attending the platform and reception. **=PASSED=**

**=MOTION 7=** The Board of Directors meeting at Annual Conference 2000 will be Sunday from 8:30 am - 1:00 pm. Elected officers will meet on Sunday from 7:00- 8:30am for a breakfast meeting. The Board will arrive on Saturday and leave on Monday. **=PASSED=**

**=MOTION 8=** Stipend for *OP* Editor. **= Tabled to Finance Committee Meeting =**

**=MOTION 9=** A Membership Committee will be formed. **= PASSED=**

SS: We need to actively maintain and recruit members.

**=MOTION 10=** The Orthopaedic Section fund the Colorado State Chapter, APTA to offset legislative expenses incurred in the last six months. The Treasurer will develop a formal policy for Chapter legislative requests for funding. The Treasurer will present the draft at the Fall Board Meeting for approval. **=Tabled to Fall Board Meeting =**

Fiscal Implications: \$2,500

=**MOTION 11**= Approve the Section office to hire a college student to create and maintain a website for the North American Orthopedic Rehabilitation Research Network. This will be done on a trial basis for 6 months and then re-evaluated. This will only happen if the Treasurer can locate funds. Help will come from someone in the North American Orthopedic Rehabilitation Network group and from a UW-La Crosse student to set up and maintain the webpage. =**PASSED providing funds are available** =

=**MOTION 12**= Approval of Media Spokesperson Network (MSN) Strategic Plan as printed by the Public Relations Committee. =**PASSED**=

=**MOTION 13**= Approve the appointment of Rick Watson to be the Director of the Media Spokesperson Network (MSN). =**PASSED**=

=**MOTION 14**= Change the name of the Veterinary Physical Therapy SIG to Animal Physical Therapist SIG. =**PASSED**=

SS: During our meeting with Jan Richardson, she shared some ideas to minimize potential conflict and ensure the longevity of this field of practice. One of Jan's suggestions is to change the name of the SIG to Animal Physical Therapist SIG. Using "Animal" will avoid potential issues with encroaching into "veterinary" practice. This will also reflect the change in terminology from "physical therapy" to "physical therapist" promoted in the *Guide to Physical Therapist Practice*.

=**MOTION 15**= Amend SIG Budget.

The Vet SIG BOD is requesting to use funds from their profits from the 1998 Equine course to assist with expense requests for 1999 (profit was approximately \$2,500):

- a. Travel expenses for David Levine as he represents the SIG at WCPT (\$100). =**PASSED**=
- b. Travel expenses for Cheryl Riegger-Krugh, ScD, PT and our Education Chair, as she develops the Home Study Anatomy course in Knoxville, TN (\$100). Cheryl is collaborating with the veterinary school to study dog cadavers, which will assist her in providing accurate information in the home study courses. =**PASSED**=
- c. We would also like to begin to create a "Veterinary Physical Therapy Compendium" which we would process through the Section as an additional source of revenue (\$300). This compendium would support the Section

goal to foster research and will be a great benefit to the SIG members. We have a volunteer, Nancy Snyder, DPT student (Slippery Rock, PA), and our Nominating Committee Chair who is willing to take on this significant project. The Compendium supports the Orthopaedic Section Goal # 7: To generate alternative sources of revenue and to increase benefits to members, as well as Goal # 3 To Foster research and develop clinical practice.

=**PASSED**=

Total Fiscal Implication: \$500

=**MOTION 17**= The Section will give written notice to AAOS canceling our CD-ROM contract with them. =**PASSED**=

SS: We have sold 55 CD-ROMs (48 to Ortho members, 4 to Non-members, and 3 to APTA members). We have 44 CD-ROMs in our inventory.

=**MOTION 19**= Approve the proposed courses and authors for 2001. =**PASSED**=

## 11.2 HOME STUDY COURSE

Proposed Authors and Topics for Current Concepts Review Course

All authors have agreed to write, if approved by the Board of Directors.

1. CERVICAL SPINE  
Dave Johnson, PhD, PT
2. THORACIC SPINE  
Tim Flynn, PhD, PT
3. LUMBAR/PELVIC REGION  
Peter Huijbrechts, MS, PT, OCS
4. HIP  
Tim Fagerson, MA, PT
5. KNEE  
Greg Bennett, PT
6. FOOT and ANKLE  
Tom McPoil, PhD, PT
7. SHOULDER  
Lori Thein-Brody, MS, PT, SCS, ATC
8. ELBOW  
Jeff Ryan, PT
9. WRIST and HAND  
Carolyn Wadsworth, MS, PT, OCS, CHT
10. CONNECTIVE TISSUE RESPONSE TO INJURY, IMMOBILIZATION, and MOBILIZATION  
Joe Threlkeld, PhD, PT
11. PATIENT EXAMINATION

=**MOTION 20**= In unusual circumstances we may allow a HSC author to exceed the \$250 expense allotment if there is reasonable justification for the expense. The author must notify the editor of anticipated additional expenses when or before submitting the first draft of the manuscript. Cases will be considered on an individual basis, and

would not exceed a total of \$500 per author. With a \$1000 maximum over expenditure as a one time annual budget item of \$1000 for the HSC budget program 11. =**PASSED**=

SS: Occasionally, unexpected expenses occur and must be picked up by the author. By carefully planning ahead the editor may be able to help the author avert these, such as noting which publishers charge for permission to reprint.

Fiscal Implication: \$1,000 annually.

=**MOTION 21**= "Retired" courses (over five years old) will be offered to the 25 physical therapy overseas programs. Send copies of each retired HSC to the following countries:

- Vietnam (9)
- Transkei (2)
- India (2)
- Surinam (3)
- St. Lucia (2)
- El Salvador (3)
- Zanzibar (2)
- Bhuttan (2)

Countries that have university-based teaching programs would be sent three copies of each course and countries having hospital-based programs would be sent two copies of each. =**PASSED**=

SS: We agreed to retire a course after five years and would discard all remaining copies. If other therapists would find them useful, we would donate them and pay shipping as a benevolent gesture.

=**MOTION 22**= A letter will be sent to each WCPT (World Confederation of Physical Therapists) country (65 total) asking if they would be interested in either retired courses or current courses. Depending on the response we could budget a given amount for this cause. =**PASSED**=

SS: We do not want to send courses to countries that may have no use for them, yet we wish to identify those who do. Based upon the response to our letter we would be in a better position to determine a budget for this cause.

=**MOTION 23**= HSC policy regarding a discounted copyright price to PT school programs: The Section will charge \$200 for two copies of one complete home study course and the right for the Physical Therapy Education programs to make copies of the course for the number of students enrolled in that class. Permission to reprint must be requested annually and will be subject to a reprint fee of \$115 per course. =**PASSED**=

SS: We currently offer courses to academic institutions at our cost of \$85. An additional discount would be at the Section's expense.

**=MOTION 24=** Recommend that a 50/50 split for joint HSCs between the Section and its special interest groups be kept for the lifetime of the course. If an idea for a HSC topic comes forward not initiated by the SIG but is appropriately related to that SIG it should be brought to the SIG's attention for the opportunity to do the HSC with the Section. **=PASSED=**

**=MOTION 25=** The Section office will not send graded final exams with correct answers indicated to registrants. Registrants may be given their scores but not the correct answers. **=PASSED=**

**=MOTION 26=** Orthopaedic Section will coordinate with Government Affairs, APTA in the planning of a manual therapy legislative strategic planning meeting to be held prior to CSM 2000. **=PASSED=**

Fiscal Implications: APTA will fund...at most we pay for our members...Practice Budget

**=MOTION 27=** A new special interest group can be formed by meeting the following criteria: Signature of 200 Section members willing to join the SIG, development of purpose and/or mission statement by interested group, approval of SIG by the BOD. It is understood that the mission of the SIG should be consistent with the strategic plan of the Section. **=PASSED=**

#### **POLICIES**

**=POLICY=** The APTA Action Packet information will be filed in the Section office. When members call requesting our compendiums we should make them aware of the packets that are available from APTA. Members calling for copies of the Action Packets should be referred to APTA.

**=POLICY=** The Section office will fax the housing forms for CSM and Annual Conference to each elected officer, Committee Chair, and SIG President. They must return the completed form to the Section office by the set deadline. (Make the deadline early enough to mail the forms in one package to APTA's housing department at least two weeks before the early bird deadline).

All the rooms will be held with the Section credit card. The deposit should be subtracted from each individual reimbursement request after the meeting.

Adjourned at 10 PM.

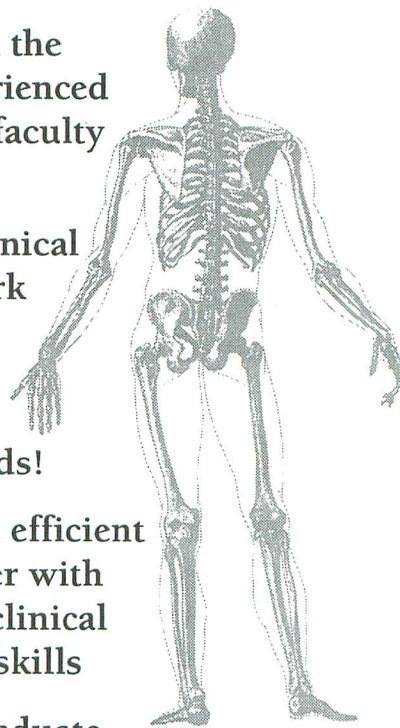
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#### **For Further Information:**

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fax: (510) 441-3241

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# Section News

## FINANCE COMMITTEE REPORT

The BOD tracked hours spent for twelve months on Section Board Related Activities. This was done to enable the section to give potential candidates some idea of the time commitment involved in fulfilling the duties of elected office.

The hours were as follows

President	498 hours a year
Directors	124 hours a year
Vice President	184 hours a year
Treasurer	340 hours a year
OP Editor	280 hours a year

Because of the number of hours spent by the President there was concern that excellent potential presidential candidates may not come forward because they could not afford to be away from their employment 20% of the time. After much discussion it was decided by the Board the office of President be given a stipend of \$10,000.00 a year. Your President, Bill Boissonnault, suggested this come with the requirement that 8 hours per week be allocated to Section business and that one 4-hour block be set aside during the week at the same time each week. The other 4 hours can be at the convenience of the President. By having

1 dedicated half day Directors and office personnel could handle business more expediently than by telephone tag.

Your President also requested that this not be initiated until the next President takes office. The BOD passed a motion over his protest to provide this stipend effective January 1, 1999.

*Dorothy Santi, PT  
Past Treasurer*

## PUBLIC RELATIONS

The most recent use of the Media Spokesperson Network (MSN) was on June 18. On June 17 the American Chiropractic Association (ACA) released a statement regarding the Health Care Financing Administration's (HCFA) policy on manipulation. That afternoon the APTA responded, clarifying the APTA's position. The APTA's press release was then distributed through the Orthopaedic Section's MSN. I commend the APTA for their quick response and also in keeping the Orthopaedic Section informed.

The exhibit booth was used at the Physician Assistant's conference in Atlanta on June 1-3, 1999. This was a great opportunity to promote physical therapy

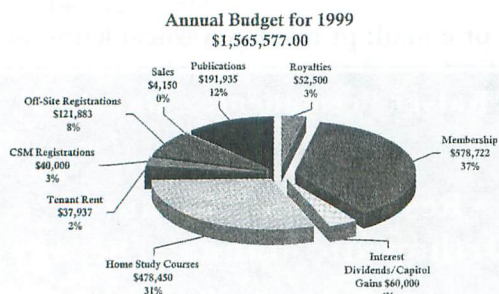
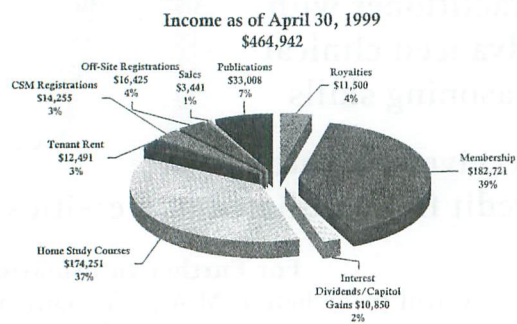
and the Orthopaedic Section to an important segment of the health care team. Most PAs work in an outpatient setting dealing with primary care and can be instrumental in recommending the benefits of physical therapy to their patients.

More than 5,000 PAs attended this year's conference. From the exhibit booth I was able to speak with a large number of them. Most of them did not have a good understanding of the existence of the Orthopaedic Section or for our board certification process. I expect many of them to be looking at our web site in the near future to check us out!

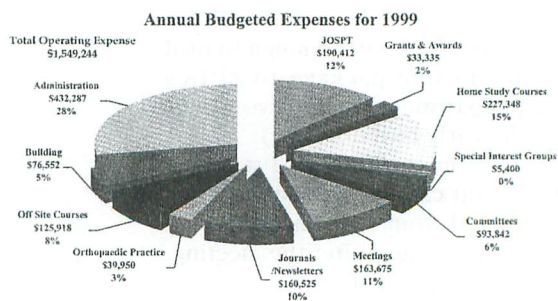
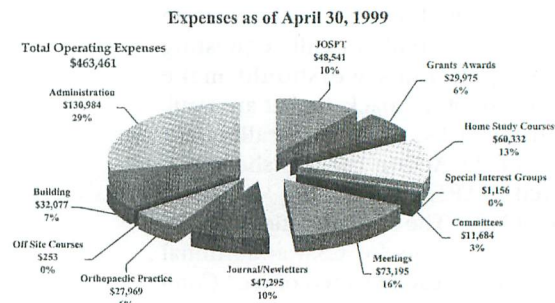
In addition to the exhibit booth I was invited to the Physician Assistants in Orthopaedic Surgery (PAOS) business meeting and the liaison networking meeting. Through contacts made at these meetings, I hope to establish lines of communication between our professions. In addition to being a significant referral source for our patients, we share many common concerns related to the delivery of health care.

*Terry Randall, MS, PT, OCS, ATC  
Chair, Public Relations Committee*

## ORTHOPAEDIC SECTION, APTA, INC. BUDGETED TO ACTUAL INCOME - 1999



## ORTHOPAEDIC SECTION, APTA, INC. BUDGETED TO ACTUAL EXPENSES - 1999



# FOOT *&* ANKLE

## SPECIAL INTEREST GROUP ORTHOPAEDIC SECTION, APTA, INC.

### Greetings Everyone!

It is my pleasure to again serve as President of the Foot and Ankle Special Interest Group. I must admit it has been fun to sit back the last few years and just enjoy attending the FASIG programs without having to be concerned about the organization of the various meetings and educational programming. Steve Baitch did an outstanding job during his tenure as FASIG President, and his hard work is greatly appreciated by all the members of the FASIG. Steve's leadership over the past 2 years as FASIG President has helped the SIG continue its strong tradition of providing outstanding CSM programming as well as communication with other foot and ankle health care providers.

His efforts in attempting to establish a more formal relationship with the American Orthopaedic Foot and Ankle Society, is especially noteworthy. I will continue with Steve's efforts to establish a strong communication link with the American Orthopaedic Foot & Ankle Society as well as with the American Podiatric Medical Association and the Pedorthic Footwear Association. I believe it is critical to continue to establish and maintain links with these professional groups to reinforce the role of the physical therapist in the provision of foot and ankle care.

The FASIG education program at the Combined Sections Meeting (CSM) in Seattle was again a great success with most of the sessions completely filled. The success of the CSM programming was because of the tremendous effort by Mark Cornwall, FASIG Vice-President. Mark is already in the planning stages for the education program for the CSM 2000 meeting in New Orleans. In addition, the FASIG will be sponsoring a 2-day "preconference course" at the New Orleans CSM Meeting. This "preconference course" will be quite similar to the 2½-day Foot & Ankle Seminar, which was sponsored by the FASIG, Orthopaedic Section and the Rehabilitation Division of the National Institutes of Health, held at Bethesda, MD in November 1998. That course was extremely well received with over 80 attendees. The tentative CSM education program as well as the tentative schedule for the "preconference course" is outlined below.

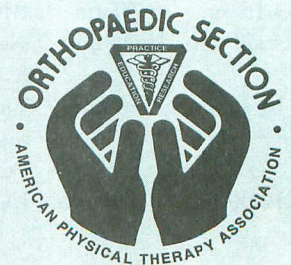
In addition, the FASIG, in conjunction with the Orthopaedic Section, is tentatively sponsoring a second 2

½-day Foot & Ankle Seminar (identical to the NIH course) in the Chicago, IL area, during June or July 2000. More information will be provided as final details are completed.

Mark is also working with Irene McClay and Debbie Nawoczinski to develop a FASIG-sponsored "research retreat" to help facilitate the development of a physical therapy body of knowledge in the foot and ankle, both from clinical and basic science standpoints. The meeting was originally planned for May 1999, but because of various scheduling conflicts, it has been postponed until the summer of 2000. Irene, who is an associate professor in the physical therapy program at the University of Delaware, has volunteered to host the research retreat possibly in May or June 2000. The tentative theme for this 2-day retreat is the "static and dynamic classification of foot structure" from both an evaluation and management perspective. The retreat should provide an excellent opportunity to establish our current level of understanding regarding foot structure classification as well as develop directions for future clinical and basic research.

Finally, I would like to see the FASIG develop a survey that would be distributed to the Orthopaedic Section membership that would be used to establish a database of physical therapists who are currently providing various levels of foot and ankle care. In addition to gaining insight into the number of therapists actively involved in providing foot and ankle care, the information obtained from the survey would be used to develop a referral database of physical therapists who can provide various levels of foot and ankle care. It is my hope to have a draft copy of the survey to present to the FASIG membership for approval at the business meeting at the New Orleans CSM, so that the survey could be distributed during the spring of 2000.

In this issue of *Orthopaedic Practice*, I have included a short foot and ankle case study for you to review and comment on. I would like to present at least 3 case studies a year as a way to stimulate discussion and debate regarding foot and ankle evaluation and management.



The format of this foot and ankle case study is very relaxed – the intent should be to share interesting patients with our colleagues. I hope that you might consider submitting a case study to be included in our FASIG section in the next issue of *Orthopaedic Practice*. If you have any questions or comments regarding the submission of a case study, please do not hesitate to contact Mark Cornwall or me.

In closing, I appreciate the opportunity to again serve as President of the FASIG. I look forward to working with each of you over the next 2 years. I encourage all of you with an interest in the Foot and Ankle to get involved in the FASIG. The success of the FASIG is directly related to the involvement of the membership, so I encourage each of you to be an active supporter of the FASIG by attending not only the education sessions but also the business meeting as well. If you have any suggestions or comments regarding the FASIG, please do not hesitate to contact me!

Best Regards,

Tom McPoil



## FOOT & ANKLE DYSFUNCTION:

### Evaluation and Management of Diabetic, Arthritic, and Orthopaedic Disorders

This 2-day workshop is designed to provide the physical therapist with the required clinical and scientific knowledge base to effectively evaluate and treat a variety of conditions affecting the foot and ankle. The workshop will include a discussion of various foot and ankle management topics including: functional anatomy of the foot and ankle, neurological factors affecting the foot and ankle, the application of functional anatomy during dynamic movement of the foot and ankle, the utilization of foot orthoses in management programs, and evaluation and management protocols used in the treatment of foot and ankle problems associated with orthopaedic and sports injuries as well as with diabetes or rheumatoid arthritis.

*The presenters for this course include:* Susan Appling, MS, PT, OCS; Joseph Shrader, PT, CPed; Michael Mueller, PhD, PT; Gary Hunt, MS, PT, OCS; Jim Birke, PhD, PT; and Thomas McPoil, PhD, PT, ATC

## DAY 1

### SESSION 1 - Basic Science of Foot Movement

8:00 am - 8:15 am	Introduction
8:15 am - 9:15 am	Functional Anatomy of the Foot & Ankle
9:15 am - 9:30 am	BREAK
9:30 am - 10:45 am	Neurological Factors Affecting Foot & Ankle Function
10:45 am - 12:00 pm	The Tissue Stress Model: A Basis for the Physical Examination of the Foot and Ankle
12:00 pm - 1:00 pm	LUNCH

## SESSION 2 - Management of the Diabetic Foot

1:00 pm - 2:00 pm	Pathomechanics Affecting the Diabetic Neuropathic Foot
2:00 pm - 2:15 pm	BREAK
2:15 pm - 3:15 pm	Evaluation of the Diabetic Foot
3:15 pm - 4:15 pm	Management Considerations for the Diabetic Foot
4:15 pm - 5:30 pm	Case Study - Neuropathic Diabetic Patient

## DAY 2

### SESSION 3 - Management of Orthopaedic & Sports Related Problems of the Foot & Ankle

8:00 am - 9:00 am	Factors Contributing to Orthopaedic & Sports Foot and Ankle Problems
9:00 am - 9:15 am	BREAK
9:15 am - 10:15 am	Evaluation of Orthopaedic & Sports Related Foot & Ankle Problems
10:15 am - 11:15 am	Management of Common Orthopaedic & Sports Related Injuries Affecting the Foot & Ankle
1:15 am - 12:30 pm	Foot Orthoses: Design and Effectiveness
12:30 pm - 1:30 pm	LUNCH

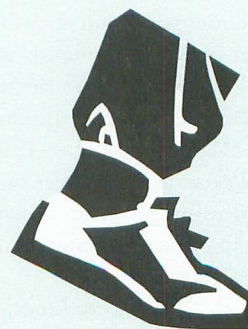
### SESSION 4 - Management of the Rheumatoid Foot

1:30 pm - 2:30 pm	Pathomechanics Affecting the Rheumatoid Foot
2:30 pm - 3:15 pm	Evaluation of the Rheumatoid Foot
3:15 pm - 3:30 pm	BREAK
3:30 pm - 5:00 pm	Management Considerations for the Rheumatoid Foot
5:00 pm - 5:15 pm	Course Summary & Evaluations

## FRIDAY AFTERNOON – General CSM FASIG

### Programming

12:30 pm - 1:30 pm	Case Study – Neurological Patient
1:30 pm - 2:30 pm	Case Study – Rheumatoid Arthritic Patient
2:30 pm - 3:30 pm	EXHIBIT BREAK
3:30 pm - 5:30 pm	The Use of Foot Orthoses: Case Studies illustrating the use Footwear & Foot Orthoses in the conservative management of foot & ankle disorders





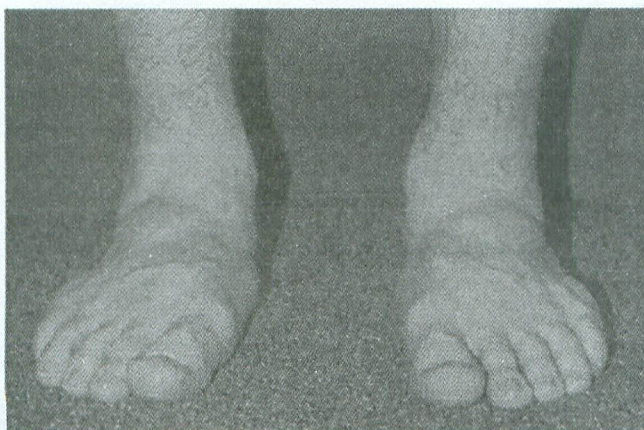
## FOOT & ANKLE CASE STUDY

Thomas McPoil, PhD, PT, ATC

The following case study illustrates the importance of assessing not only the profile of the medial longitudinal arch and hindfoot position, but also the amount of mobility present in both the midfoot and hindfoot. Individuals with "flat feet" are commonly grouped together as patients with excessive pronation. Unfortunately, these individuals may have "flat feet" but also have limited joint mobility, which necessitates a change in the approach used to successfully manage the patient.

### PATIENT HISTORY:

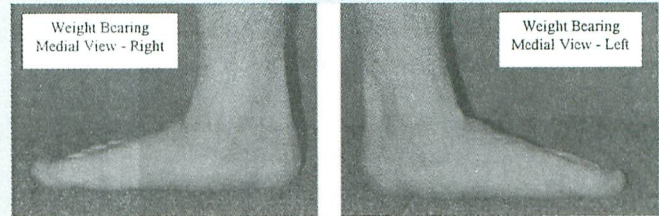
C.M. is a 19-year-old male complaining of pain in the right foot over the medial aspect of the tibial, extending from just inferior to the medial malleolus to approximately 6 cm above the medial malleolus. He has had the pain for the past 3 weeks. He had been diagnosed with posterior tibial tendonitis by his team's athletic trainer. C.M. is a member of his university I-AA intercollegiate football team and plays the position of linebacker. His height is 73 inches and his weight is 210 pounds. He notes that he has had flat feet all of his life, with his right foot worse than the left, and remembers wearing braces and special shoes as a child. He states that he had "arch pain" as well as shin splints throughout his high school football career and used foot orthoses to alleviate his symptoms. While the foot orthoses helped decrease his symptoms, the rigid plastic orthoses made his feet tired, tended to roll his feet to the lateral side of his shoes (he felt because of the rearfoot varus post), and usually would crack on a yearly basis near the rearfoot post. Currently, he was not using any type of foot orthoses and was having the athletic trainers tape his foot daily for practices as well as games. While his symptoms have improved since he began having his arches taped, the skin on the bottom of his feet has become irritated. In addition to his primary complaint, he also states that his feet always feel very tired and that he has difficulty doing squats during his weight lifting sessions. He would like to have a pair of foot orthoses that would support his feet similar to the taping but at the same time would provide some cushioning.



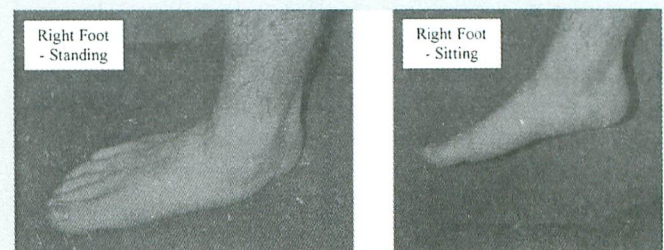
STANDING WEIGHT-BEARING VIEW

### SIGNIFICANT FINDINGS FROM PHYSICAL EXAMINATION:

- General Foot Posture in Standing
  - Both feet exhibited an extremely flat medial longitudinal arch with the right foot slightly lower than the left foot
  - Both calcanei only slightly everted



- Active and Passive ROM
  - Within normal limits for talocrural (ankle) joint nonweight bearing
  - End-range dorsiflexion limited when standing, full-weight bearing
  - First MTP extension – 65° nonweight bearing; 35° weight bearing
  - Passive mobility of hindfoot – limited with inversion greater than eversion bilaterally
  - Passive mobility of the midfoot
    - Oblique movement – markedly limited bilaterally
    - Longitudinal movement – minimal amount of motion bilaterally
- Sit to Stand
  - No change in foot or medial longitudinal arch posture was observed during sit to stand bilaterally
  - Profile of medial longitudinal arch low while weight bearing, bilaterally



- Attempts to have patient elevate or "create" a medial longitudinal arch while weight bearing unsuccessful. When patient attempted to elevate the MLA, the entire plantar surface of the foot would lift off the ground as a unit – no evidence of independent midfoot movement
- Great Toe Extension Test
  - Positive for reduced windlass mechanism response
- Navicular Height Measurement
  - Not done because of patient's inability to elevate the MLA
- Dynamic Plantar Pressure Assessment
  - Right foot demonstrated greater plantar surface area than the left foot

- Differential diagnoses for Posterior Tibial Tendonitis
  - *Medial Tibial Stress Syndrome*
    - No pain noted with palpation of the medial border of the tibial shaft
  - *Soleus Syndrome*
    - Negative based on symptoms
  - *Tibial stress reaction/fracture*
    - Negative based on symptoms
  - *Compartment syndrome*
    - Negative based on symptoms

**ASSESSMENT:**

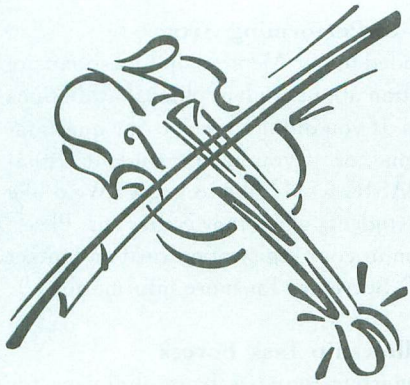
Patient's diagnosis was posterior tibial tendonitis secondary to a rigid pes planus foot type.

**MANAGEMENT PROGRAM:**

- Patient continued to use ice to control inflammation as well as NSAIDs.
- Foot Orthoses fabricated to provide total contact, cushioning, as well as motion control
- LiteOption base shell was modified with a heat gun to decrease the apex under the medial longitudinal arch until the patient could ambulate comfortably. Once modifications to base shell were completed, a 5 mm UCOLite top cover (full length) was then adhered to the modified base shell. With the athlete standing on the completed orthoses, a full-length medial wedge with a maximum height of 3 mm was taped in position under the base shell. Based on patient feedback regarding comfort and foot control, a 3-mm wedge was placed on the right orthoses and 2-mm wedge was placed on the left orthoses. The wedges extended from just proximal to the first metatarsal head to the posterior (heel) aspect of the orthoses.
- To improve efficiency during squatting activities, the patient was instructed to place ½ inch lifts, fabricated from plywood, under the medial aspect of each foot.
- The patient was instructed to continue extrinsic muscle exercises that had been initiated by the athletic trainer, in addition to his other weight training activities.

**FOLLOW-UP:**

- At 2 weeks, the patient reported 85% relief of his symptoms and an improved level of performance in his squatting activities.
- At 4 weeks, the patient reported 95% relief of symptoms as well as a noticeable relief of leg fatigue. He also liked the cushioning provided by the orthoses, especially when playing on artificial turf.
- At 2 months (end of football season), he continued to report a 95% to 100% relief of symptoms.



# Performing Arts



SPECIAL INTEREST GROUP

ORTHOPAEDIC SECTION, APTA, INC.

## President's Message

Greetings to the Membership! I just wanted to let you all know what your Executive Board has been up to since the Combined Sections Meeting in February. First, we have established our programming for CSM 2000 — keep on reading for a sneak preview. We would love to see all of you in New Orleans!! Second, our mentorship and fellowship task forces are hard at work putting together resource lists for performing arts affiliations and recommendations for continuing education. You can help us out by answering the enclosed questionnaire about performing arts continuing education. We are also in the process of defining the components of a formal performing arts fellowship. Our PR committee is also hard at work revising our publicity brochure, developing PASIG lapel pins, and writing/collecting articles highlighting regional performing arts news. If you would like to contribute an article, please contact Jeff Stenback. Finally, our membership directory will be revised again this year to make it Y2K compliant — please read on for details so that you will be included in the new directory. As always, please feel free to contact anyone on the Executive Board with your questions or concerns, or to become more involved with YOUR special interest group. Thanks.

*Jennifer Gamboa, PASIG President*

## PASIG CSM '2000 PROGRAMMING

12:30-4:30 Saturday, 2/6/99

12:30-1:30 Title: Adolescent Idiopathic Scoliosis: An Overview

Speakers: Michelina Cassella PT and Christine Ploski PT, MS, PCS

Description: Session will include the definition, classification, and types of scoliosis. Emphasis will be on adolescent idiopathic scoliosis (AIS): incidence, prevalence, screening, criteria for treatment, occurrence in dancers, and the role of exercise. A case study of a young dancer with a right thoracic scoliosis currently undergoing brace treatment will be presented, with emphasis on the physical therapy management and how it is integrated with dance activities.

1:30-3:00 Shop Talk. Three treatment techniques used in the performing arts are presented as "clinical pearls" and then demonstrated. Open for "related pearls" from the audience.

1:30-2:00 Title: Breathing Techniques to Enhance Performance Quality and Reduce Injuries of the Performing Artist

Speaker: Lynn E. Meadoff, MA, MPT

Description: A technique to improve diaphragmatic breathing mechanics will be presented. This technique improves performance quality by promoting relaxation, improving alignment, and training the artist to effectively stabilize static and dynamic postures.

2:00-2:30 Title: Working with the Performing Artist from the Perspective of a Feldenkrais® Practitioner  
Speaker: Margaret J. Pittenger, MSPT  
Feldenkrais® Practitioner and Susan Robinson, DPT

Description: By training and tradition, musicians and other performing artists are taught to overpractice, overlook pain and injury, and push to achieve a higher level of skill. Using the Feldenkrais® Method, one can restore a sense of total body and heightened awareness of movement.

2:30-3:00 Title: Athletic Taping for Performing Artists

Speaker: Nick F. Quarrier, MHS, PT, OCS

Description: Two basic taping techniques will be demonstrated and practiced for the dancer's foot and the musician's hand.

3:00-4:30 Dialogs in Performing Arts Research

Current performing arts research, at various stages of completion, will be presented. An expert panel will provide feedback regarding methodology, analysis, and publishability.

Expert Panel: Nancy Byl, PhD, PT (moderator); Phyllis Brown, PhD, PT; Debbie Nawoczinski, PhD, PT; Linda VanDillen, PhD, PT; and Katherine Roach, PhD, PT.

Research Presenters: Peter Edgelow, PT, Martha Brown, PT, and two others to be announced.

This looks to be a great program with something for all. Please join us.

*Nick Quarrier, PASIG Vice President*

### ATTENTION ALL MEMBERS!

#### Membership Registration Update Request

Please keep in mind that Orthopaedic Section membership is a prerequisite to being a member of the PASIG and being included in the PASIG Member Directory! We are now planning the production of a Y2K update. If you'd like to join us or are already a member of the PASIG, please send in this Registration Card to ensure we have current information for our Directory. **THIS MEANS EVERYONE.** This is your chance to start Y2K right, and to become a part of our national directory of performing arts practitioners. The PASIG Directory will be available for our members at the '2000 CSM, and will be made available to performing artists, groups, and companies. Please include the name, address, and phone number of the place where you practice, as PASIG members may seek your assistance for traveling performers, etc. And, we do not have E-MAIL addresses for many of you who are on-line!

The deadline for registration card submissions is 11/30/99. We would like to include your area of specialty (if you have one), full credentials including specialization certification and performing arts affiliations. Please mail registration cards to: PASIG, Orthopaedic Section, APTA, 2920 East Avenue South, Suite 200, La Crosse, WI 54601, or fax to: 608/788-3965

Name: \_\_\_\_\_

APTA #: \_\_\_\_\_

Work Address \_\_\_\_\_

Tel: \_\_\_\_\_

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

E-mail: \_\_\_\_\_

Home Address \_\_\_\_\_

Tel: \_\_\_\_\_

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

E-mail: \_\_\_\_\_

Performing Arts Affiliations: \_\_\_\_\_

What % of your patient population are performing artists? \_\_\_\_\_

What % of the performing artists are:

a) musicians \_\_\_\_\_

b) dancers \_\_\_\_\_

c) vocalists \_\_\_\_\_

d) gymnasts \_\_\_\_\_

e) ice skaters \_\_\_\_\_

f) other (list) \_\_\_\_\_

Orthopaedic Section Membership current? (If you're not sure, please call the Ortho office).

Yes \_\_\_\_\_ No \_\_\_\_\_

Does your practice have a Performing Arts student clinical affiliation? Yes \_\_\_\_\_ No \_\_\_\_\_

### Clinical Affiliations In Performing Arts

Many of you responded to our Mentorship Questionnaire last year with information about student clinical affiliations in the Performing Arts. If you did not receive our questionnaire and would like one, or, if you have a student affiliation in this area, the PASIG would like to know! We'd like to provide a listing for students when they contact us. Please include this information in your registration card or contact Shaw Bronner, PASIG Secretary for more information.

### Mentorship And Fellowship Task Forces

In response to numerous requests from clinicians for guidance in continuing education, we are asking for help from experts in the field. Our goal is to compile a list of specific courses or types of courses. These requests come from people with a wide range of experience, from entry level to those looking to hone their skills. All share an interest in treating performing artists.

If you are willing to help with us with this project, please fill out the enclosed form. You have our assurance that your name will not be released, nor will we be giving official endorsement to any particular course or instructor. If you have any questions or suggestions, please feel free to call Martha Brown PT, at 718-768-2754. Please mail your suggestion cards to: PASIG, Orthopaedic Section, APTA, 2920 East Avenue South, Suite 200, La Crosse, WI 54601, or fax to: 608/788-3965

### Webpage

We are working on our Webpage, which is accessed through that of the Orthopaedic Section. If you have suggestions for what the PASIG should include, please contact Nick Quarrier, PASIG Vice President.

### Mentorship and Fellowship Task Force Committees

Name: \_\_\_\_\_

Performing Arts Affiliations: \_\_\_\_\_

Recommended courses for new grads who want to pursue treating performing artists:

Course Name and who offers it \_\_\_\_\_

Instructors \_\_\_\_\_

Level \_\_\_\_\_

Why Recommended \_\_\_\_\_

Recommended courses for PTs with general experience but wish to further their education in the area of treating performing artists.

Course Name and who offers it \_\_\_\_\_

Instructors \_\_\_\_\_

Level \_\_\_\_\_

Why Recommended \_\_\_\_\_

## PASIG Clinical Pearls

At the suggestion of PASIG member Enid Woodward, we are implementing a new column, "Clinical Pearls." We invite each of you to share with us and our members, techniques and ideas you use in clinical practice. We thank PASIG member Marika Molnar for allowing us to reprint her pearl from a recent International Association for Dance Medicine and Science newsletter. Marika is currently President of IADMS.

Subject: Recovery of Coordination, Control, and Strength in Preparation for Jumping

Contributor: Marika Molnar, PT

From my clinical experience, as dancers recover from foot and ankle problems, they often lack the coordination, control, and strength necessary to land from jumps. Often they cannot even lower down from relevé without wobbling. One of the methods I use to re-educate their muscles is to use the **calf board** in reverse so that they are standing with their heels higher than their toes. This allows for only a small heel lift since they are already up and they can slowly practice lowering down, which is very close. We vary the speed of this from slow to quick. Then I lower the calf board, or use another calf board with a different degree of incline and repeat the process until they are standing flat on the floor.

Then I repeat the whole process from the beginning with one difference. Although they relevé on both feet, they lower down on one repeatedly as above, until they are on flat ground. Then I have them stand on the calf board as if to stretch their calves, but instead we work on the relevé, now lowering down below the level of the floor to improve their eccentric strength. This process may take a few weeks or so, depending on their progress. If a calf board is not available, you can fold up a few towels and stand them under your heel and slowly remove them as you develop strength and coordination in lowering down. It is important to perform these exercises with good alignment of the foot and leg and to vary the speed.

## Emergency Response Certification

We'd like to direct PASIG members to the Emergency Response Certification course, sponsored by the Sports Section October 19-21 in Cincinnati and January 30-February 1st in New Orleans as a pre-CSM course. This course may be invaluable to those PASIG members who provide treatment to performing artists in outpatient, backstage, and other off-site settings, particularly if you must provide triage following an accident.

Class size is limited (20) and registrants are **REQUIRED** to complete a workbook (part of your course materials) **PRIOR** to attending the actual course. Apparently the workbook requires approximately one (1) month's time to complete. The Sports Section is considering opening a second class for this same time period, depending on demand for the course. Please contact the Sports Physical Therapy Section directly at 800/285-7787 or email: [jeand@spts.org](mailto:jeand@spts.org).

## Therapy Services at Alvin Ailey

*Shaw Bronner PT, MHS, OCS*

The Alvin Ailey American Dance Theater has become an American institution since its inception 40 years ago. One recent advancement for the Company, on this 40th anniversary, was the formalization of comprehensive in-house physical therapy services. This physical therapy program was developed slowly, through many small increments. In treating several Ailey dancers in my private practice, I became increasingly aware of the need for more immediate and comprehensive therapy services for this company. I built a relationship with the Ailey community which started with backstage therapy coverage during the Company's annual 4-week New York season in 1993, and progressed to occasional travel with the Company and screenings for the school, in addition to rehabilitation of injuries.

In September 1998, Alvin Ailey Dance Theater Foundation and HealthSouth entered into a sponsorship agreement of physical therapy services. This has enabled the development of a comprehensive provision of services to the 2 dance companies: Alvin Ailey American Dance Theater (AAADT) and Alvin Ailey Repertory Ensemble (AARE), and dance school: Alvin Ailey American Dance Center (AAADC), which comprise Dance Theater Foundation. This is a population of approximately 800 student and company dancers.

My responsibilities, as Director of these services, include annual screening of incoming students, weekly injury clinics to triage musculoskeletal complaints, management of an in-house training room available to the Ailey community, coordination of traveling therapists for the first company (AAADT), and setting up local coverage on the road for the second company (AARE). In addition, I have implemented an injury tracking system for analysis of injury patterns sustained by company members, and provide rehearsal and theater coverage for each company when they are at home in New York. I now have identified a small group of therapists, trained in dance medicine, to tap as traveling therapists to go on the road with the first company. This is a key component to our management of injuries, as Ailey travels approximately 22 weeks per year out of a 40-week contract.

While traveling with the Company to Italy, I learned about potential environmental hazards of dancing which I had never considered. At the Spaleto Festival, I set up my table in the cavernous passages under a Roman amphitheater. While the dancers baked in the sun on-stage during rehearsal, I wore a sweater in my cool cave. At sunset, the mountain temperatures would plummet, causing dew to gather on the stage. In addition to the crew attempting to keep the slick stage surface dry, dancers often huddled by portable heaters with flesh-colored unitards under their regular costumes in attempts to stay warm. In Palermo, Sicily, the outdoor raked stage was painted plywood which splintered as you danced on it. In addition to the adjustment to the incline of the rake (dancing downhill as you moved toward the audience and uphill as you moved away), dancers had to wear slippers or shoes at all times. With that preface, I'd like to introduce Amy Wightman, who recently toured with the first company.

**62 Legs + 31 Backs x 10 Cities + 2 Suitcases = 1  
FANTASTIC Experience!!**

*Amy B. Wightman, MS, PT*

Recently, I had the opportunity to travel with the Alvin Ailey American Dance Theater as the company physical therapist for their 1999 US Tour. This was a tremendous experience and I would like to share with you the unique aspects of a traveling therapist.

The Alvin Ailey American Dance Theater is an extraordinary modern dance company. It is comprised of 31 dancers with a working repertoire of about 20 ballets. They perform 8 times a week for 6 days with very little time off. Each performance involves hours of classes and rehearsals, not to mention miles and miles of travel. The company tours both nationally and internationally and is known as one of the world's elite modern dance companies. Each dancer in this company displays incredible devotion and dedication, which is essential to their success. Their love of dance clearly shows in every performance.

My involvement with the Alvin Ailey American Dance Theater arose from my own background as a dancer. I studied dance for 13 years and then, due to a hip injury, I was unable to continue dancing. At the time of my injury, there were few people who specialized in dance medicine, and so I was misdiagnosed for nearly 6 years. This injury, my experiences in physical therapy as a patient, and my love of dance inspired me to become a physical therapist. With my knowledge of dance and physical therapy, I am better able to understand the mechanisms of injury to a dancer.

For therapists who treat Ailey dancers, it is key to be familiar with the choreography and Horton technique (one of several styles of modern dance training), in order to determine the mechanism of injuries. The role of the therapist extends beyond relieving symptoms. The overall goal is to decrease mechanical stresses to the dancer and allow for optimal efficiency of their movement. I found that, by watching rehearsals and performances, I could spot potential problem areas. By working with the dancers, we are often able to intervene in technique problems and prevent the injury from occurring. This educational component of therapy is essential to reduce overall injuries in the company.

As the company's traveling physical therapist, I was the first person involved in triage of injuries. After screening the injury, I would refer the dancer for further medical work up when warranted. Ultimately, this improves the care given to the dancer, minimizes down time and saves the company money. In the past when a dancer was injured, they would automatically go to the emergency room for evaluation and testing. The dancer was then inevitably told to stop dancing. Most often an emergency room visit is not necessary and an injury can be treated conservatively with on-site physical therapy.

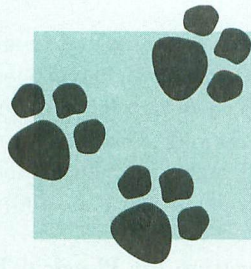
The backstage conditions in which I treated the dancers varied widely. Therapy rooms included a dressing room, a rehearsal room, a basement, and even a storage closet. Lighting and room temperatures were never predictable. The

room temperature was most often on the cool side which made treatments difficult at times. The company travels with a portable treatment table, ultrasound, electric stimulation machine, gymnastics balls, rotation discs, foam rollers, and other equipment commonly used for therapy. There were times that I had very limited space in the treatment area, and I had to improvise and alter my treatments to accommodate each individual situation.

The schedule of a traveling therapist is very different from the therapist who works in a clinic setting. A typical day starts late in the morning and ends around eleven o'clock at night. Generally, I was at the theater whenever the dancers were there. I started my regular therapy schedule about 1 hour prior to rehearsal and worked through the afternoon. I usually took a short dinner break and then returned to the theater with additional sessions until one-half hour prior to the performance. If I was not needed backstage, I watched the performance from the house. In an emergency, everyone knew where I was seated, so I could be reached at all times. There were a couple of instances when I was called backstage due to an injury. Unlike a therapist in the clinic, who for the most part has a predictable schedule, the traveling therapist must be flexible and ready to act at all times. I found this aspect of the job to be challenging, but also exciting.

For my portion of the US Tour, I traveled from coast to coast: visiting 10 cities from New York City to Seattle to Los Angeles to Chicago and back to New York City in 7 weeks. There was even a little time to see the sights and learn about this great country. I learned to pack lightly to accommodate the clothing needed for climates that went from cold and windy to almost tropical. During my travels, I met many people and established treasured friendships. Living out of a suitcase for weeks at a time is not very glamorous, but the benefits of working with this extremely talented company outweighed any drawbacks. Traveling may not be for every therapist. I found it to be a great way to see the world while combining 2 areas which are of great interest to me, dance and physical therapy. Dancers are extraordinary patients who are extremely motivated and respond quickly to treatment. This experience was rewarding for me as it allowed me to be involved in this growing field of dance medicine.





# Animal

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### Calendar of Events

Home study courses in Canine and Equine Anatomy and Biomechanics for the physical Therapist are being developed for the year 2000 by the Orthopaedic Section. Authors include Cheryl Riegger-Krugh, PT and Kevin Haussler, DVM.

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### 1999 Membership Directory

The APTSIG has a membership directory which is available at the Orthopaedic Section office. The cost is \$5.00 for APTSIG members and \$10 for nonmembers. If you would like to purchase a directory or if you have any questions please contact Tara Fredrickson at 800-44-3982 ext. 205.

### The APTSIG Update

1. Member and nonmember directories are available through the Section office. As of January 1999 the APTSIG has 295 Orthopaedic Section members.
2. State Liaisons: To date there are 31 states that have APTSIG Liaisons. They have been asked to collect information on their state practice acts, submit a general information article about the SIG to their chapter newsletters, offer to present a brief presentation about physical therapists to their state veterinary association, and to report back to the SIG by November 1, 1999. Rita Brereton, PT continues to coordinate this nationwide grassroots effort.
3. Public Relations: This Committee, chaired by Nancy Murphy, PT is developing a 1-page handout for the International Symposium at Oregon to have available at the Orthopaedic Section booth. This committee continues to organize our SIG newsletter to meet the interests of our membership.
4. A meeting of the SIG officers and Jan Richardson was facilitated by Nancy White, MS, PT, OCS, Vice President of the Orthopaedic Section and the APTSIG Board Liaison. The meeting was held April 24, 1999, in Alexandria, Virginia and was attended by Jan Richardson, Nancy White, David Levine, and Lin McGonagle. A variety of issues were discussed. We are fortunate to have input from Jan Richardson regarding the APTA's perspective and direction for this field of practice. The following changes involving the SIG will be made as we move forward.
  - a. The SIG has a new name, THE ANIMAL PHYSICAL THERAPIST SPECIAL INTEREST GROUP. This reflects language that is emphasized in the *Guide to Physical Therapist Practice*.
  - b. The certification process for the APTSIG will proceed more slowly than anticipated. Because this is such a new areas of practice, it is important that the proper steps be taken to ensure that the certification process achieves the recognition it deserves through the Ameri-

can Board of Physical Therapy Specialties (ABPTS). One of the first steps in the process is to develop a description of advanced clinical practice (DACP). Nancy Ford, PT is coordinating this effort. If you would like to be involved in the development of the DACP, please contact Nancy Ford at 900 Clintonville Rd, Wallingford, CT 06492 (203)981-1055 or (203)265-1975.

- c. Jan Richardson will remain as National liaison between APTA and AVMA.
- d. The SIG will be working on a Compendium for Animal Physical Therapy. This document will contain abstracts and original research articles in animal physical therapy.
- e. Gwynne Oakes has resigned as Secretary/Treasurer of the SIG. The officers have discussed possible replacements and decided to approach Nancy Murphy, our Public Relations Coordinator. In the interim, David Levine and Lin McGonagle developed the budget with the assistance of the Section staff to meet the July 1 deadline. We would like to take this opportunity to thank Gwynne for the past 2 years of dedicated service as Secretary/Treasurer. She was one of the founding members of the SIG. We will all miss her hard work and commitment to the SIG. We wish her the best in the future.
- f. Canine Physical Therapy I Course was held for the first time June 18-20. Seventy-five people attended. You will find a review of the course later in the newsletter.

**CALL FOR NOMINATIONS!** Nominations are needed for all officers! If you or someone you know is interested in serving as an officer of the APTSIG please submit the form below to: **Nancy Snyder, DPT, 1147 E. Pine Street Extension, Grove City, PA 16127**

**THE ANIMAL PHYSICAL THERAPIST SIG  
NOMINATION FORM:**

Candidate Name: \_\_\_\_\_  
Nominated for: (office) \_\_\_\_\_  
Contact address/phone: \_\_\_\_\_  
Candidate's qualifications: \_\_\_\_\_

A list of all candidates will be sent to the APTSIG members for a vote.

**You Can Get Involved in Equine Research to  
Promote Physical Therapy**

**Research Grants to Investigate Therapeutic Options**

The effectiveness of therapeutic options in equine health care will be investigated through research grants established by the American Association of Equine Practitioners (AAEP). The AAEP Board of Directors recently announced the appropriation of \$25,000.00 to fund pilot studies.

Therapeutic options, such as acupuncture, chiropractic, and physical therapy, continue to stimulate discussion among equine practitioners and horse owners regarding their benefit

to the horse.

Grant submissions are not restricted to members of the veterinary profession. Criteria for the proposals are deliberately nonrestrictive to encourage ingenuity in scientifically evaluating therapeutic options. Deadline for submissions is October 15, 1999. For more information about the therapeutic options grants contact AAEP at (800)443-0177.

**13th World Confederation for Physical Therapy  
Congress in Yokohama, Japan**

*Submitted by David Levine, PhD, PT and Darryl Millis, MS, DVM of the University of Tennessee.*

The University of Tennessee College of Veterinary Medicine recently presented an invitational seminar on Animal Physical Therapy at the 13th World Confederation for Physical Therapy Congress in Yokohama, Japan. The Congress was opened by a surprise visit from the Emperor, which was a rare public appearance, and a great honor for the physical therapy profession. The Congress attracted 3,000 participants from all over the world with approximately 150 from the United States. Japan did a wonderful job as the host nation providing a well run and overall excellent conference.

The animal physical therapy seminar was attended by approximately 300 people, mostly from outside the United States. We had the opportunity to discuss the field with individuals from at least 15 countries and the general consensus is that it is a growing profession in most areas of the world. The seminar focused on animal physical therapy from a worldwide perspective and provided a general overview on the field. One interesting note is that in Japan, cats are much more popular than dogs, as apartment living is very common due to space restrictions, and dogs are seen as a potential problem if they bark.

**Canine Physical Therapy I**

*A Review by Nancy Murphy*

The Canine Physical Therapy I course occurred June 18-20, 1999, at the University of Tennessee College of Veterinary Medicine in Knoxville, Tennessee. Speakers included David Levine, PT, PhD, Darryl Millis, MS, DVM, Robert Taylor, MS, DVM, Elizabeth Shull, DVM, and Joseph Weigel, MS, DVM. The course was attended by 75 participants and was a great success. The course was well organized and the speakers were extremely interesting and well versed in their specialties.

Dr. Levine, a professor of Physical Therapy at the University of Tennessee, Chattanooga and Vice President of the APTSIG, presented the introduction and reviewed the legal issues concerning the practice of animal physical therapy by physical therapists. Please refer to past issues of the Animal PT (formerly Veterinary) SIG Newsletter or the Resource Manual available through Lin McGonagle to obtain more information about the legal issues of practicing animal physical therapy. Dr. Levine and Dr. Millis also shared their knowledge of rehabilitation techniques currently used on dogs in the College of Veterinary Medicine Reha-



bilitation Clinic at UT Knoxville.

Dr. Millis, a professor of Veterinary Medicine at UT Knoxville and a specialist in bone healing and arthritis, spoke on gait evaluation, neuroanatomy, and common neurological conditions found in dogs. Dr. Millis stated the basics of gait evaluation can be found in a book entitled "The New Dog Steps" by Page Elliot.

Dr. Taylor is the owner of Alameda East Veterinary Hospital in Denver, Colorado and is a professor at the University of Colorado in Denver. Dr. Taylor is also noted for a television show concerning emergency veterinary medicine which is filmed at his hospital. This show can be found on the Animal Planet channel. Dr. Taylor's topics included physical therapy opportunities in veterinary medicine, osteology, myology, and common musculoskeletal problems found in canines.

Dr. Weigel is a professor of Veterinary Medicine at UT Knoxville. The subject of his lecture was functional arthrology of the canine. He stated that dogs bear approximately 70% of their weight in their fore limbs and approximately 40% in their rear limbs. He also noted that dogs have the ability to change their center of gravity when they have an injured limb. According to Dr. Weigel, this is why dogs with use of only 3 limbs can continue to jump and climb stairs.

The last speaker was Dr. Shull, professor of Veterinary Medicine at UT Knoxville, who spoke on Behavioral Management of the Canine Physical Therapy Patient. She stated that fear aggression is the most common type of aggression manifested by dogs in a veterinary clinic. She also stated that behavior modification using systematic desensitization and counterconditioning can be used to control this behavior.

The remainder of the course consisted of laboratory sessions including a tour of the Veterinary Medicine facilities and rehabilitation clinic at UT Knoxville, palpation and goniometric measurements on live animals, and cadaver studies of canine osteology, arthrology, and myology.

### Respiratory Physical Therapy For Animals

Submitted by Lin McGonagle, PT

Veterinary patients who are critically ill or immobilized for long periods of time are at risk to develop secondary complications such as decubital ulcers, atrophy of muscles, decreased strength, loss of motion, edema, discomfort, and respiratory problems. Physical therapy has an important role in helping to prevent the detrimental effects of surgery or disease. It has been documented that human patients have experienced improved oxygenation, increased comfort, and decreased time from admission to hospital discharge with basic physical therapy for the chest and musculoskeletal system.

Specific pulmonary complications include atelectasis, pneumonia, and mechanical ventilation. These disorders can lead to many potential problems—accumulation of respiratory secretions in dependent airways, lung consolidation, collapsed airways, depressed cough, loss of motion, and peripheral edema.

A rehabilitation program for animals might include po-

sitioning, postural drainage, percussion, vibration, tracheal suctioning, rib springing, induced cough, massage, passive and active exercise, compression bandages, and standing frames or carts.

Details of treatment protocols:

Positioning: change animals position every 2 to 4 hours.

Postural Drainage: 5 to 10 minutes in appropriate positions to address secretions in affected lobes determined by auscultation, 3 times daily. Provide oxygen as needed.

Suction every 2 to 3 hours as needed and after postural drainage, maximum of 10 to 15 seconds.

Massage each limb for 5 minutes (effleurage and petrissage)

Passive range of motion of all joints of all 4 limbs (10 repetitions) 3 times daily.

Percussion over affected lobes for 3 minutes. Provide oxygen as needed.

Vibration during 5 to 6 consecutive exhalations after percussion.

Rib springing 3 to 4 times following vibration to stimulate a deeper inhalation.

Induced cough when upper airway secretions are present.

Compression bandages to prevent peripheral edema

Standing frame or cart for sternal positioning.

Precautions to physical therapy intervention are pain, open wounds or burns, unstable cardiovascular condition, recent skin graft, thoracotomy within the previous 24 hours, platelet count below 30,000/microliter, pneumothorax, coagulopathy, and rib fractures.

Before a physical therapy plan is implemented, it is important to have a veterinarian provide a thorough examination of the patient which would involve radiographs, echocardiogram, arterial blood gases, baseline respiratory rate, heart rate, and rhythm. During treatment the patient should be assessed by auscultation and observed closely for discomfort or adverse effects.

See Figure 1 on page 48.

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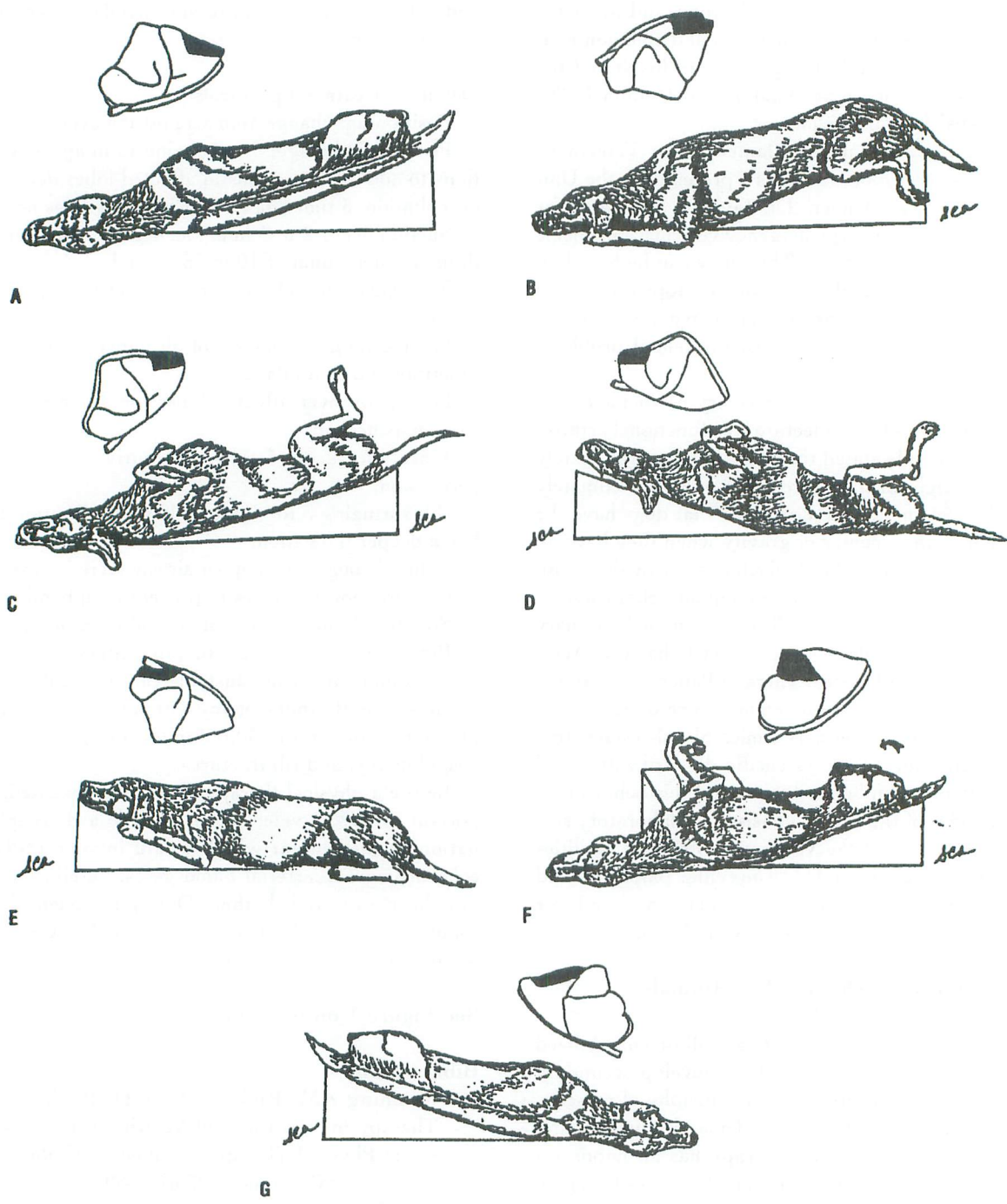
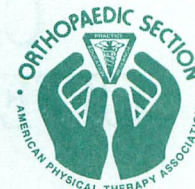


Figure 1. Positions for draining various portions of the lungs. (A) Lateral segment of the left caudal lung lobe. The patient is in left lateral recumbency with the hind end elevated 40°. (B) Left and right caudal dorsal lung fields. The patient is in sternal recumbency with hind end elevated 40°. (C) Left and right caudal ventral lung fields. The patient is in dorsal recumbency with the hind end elevated 40°. (D) Left and right cranial ventral lung fields. The patient is in dorsal recumbency with the front end elevated 40°. (E) Left and right cranial dorsal lung fields. The patient is in sternal recumbency with the front end elevated 40°. (F) Right middle lung lobe. The patient is in dorsal recumbency. A pillow has been placed under the right side of the thorax so that the right side is higher than the left side. The hind end is elevated 40°, and the front end is rotated one quarter turn to the right. (G) Lateral segment of the right caudal lung lobe. The patient is in left lateral recumbency with the hind end elevated 40°. Reprinted with permission of authors.



OCCUPATIONAL HEALTH  
PHYSICAL THERAPISTS  
SPECIAL INTEREST GROUP



ORTHOPAEDIC SECTION, APTA, INC.

Summer 1999

Volume 6, Number 3

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# CHECK OUT SOME OF THE AWARDS OFFERED BY THE ORTHOPAEDIC SECTION!



Listed below are descriptions of various awards offered by the Orthopaedic Section, APTA, Inc. Please contact the Orthopaedic Section office if you would like a detailed description of each award and the criteria for submission.

## AWARD FOR EXCELLENCE IN TEACHING OF ORTHOPAEDIC PHYSICAL THERAPY

*Submission deadline: November 1, 1999*

This award is given to recognize and support excellence in instructing OPT principles and techniques through the acknowledgment of an individual with exemplary teaching skills. The instructor nominated for this award must devote the majority of his/her professional career to student education, serving as a mentor and role model with evidence of strong student rapport. The instructor's instructional techniques must be intellectually challenging and promote necessary knowledge and skills.

## OUTSTANDING PT & PTA STUDENT AWARD

*Submission deadline: November 1, 1999*

The purpose of this award is to identify a student physical therapist and a student physical therapist assistant (first professional degree) with exceptional scholastic ability and potential for contribution to orthopaedic physical therapy. The eligible student shall excel in academic performance in both the professional and pre-requisite phases of their educational program, and be involved in professional organizations and activities that provide the potential growth and contributions to the profession and orthopaedic physical therapy.

## PARIS DISTINGUISHED SERVICE AWARD

*Submission deadline: August 2, 1999*

This award is given to acknowledge and honor a most outstanding Orthopaedic Section member whose contributions to the Section are of exceptional and enduring values. The nominee shall have made substantial contributions to the Section in areas such as: professional recognition and respect for the Section's achievements, and advanced public awareness of orthopaedic physical therapy.

## JAMES A. GOULD RESEARCH AWARD

*Submission deadline: September 15, 1999*

This award is given to acknowledge and honor authors of outstanding clinical research investigations which make significant contributions to orthopaedic physical therapy, and to contribute to the quality of research in orthopaedic physical therapy. The submitted paper must be original, unpublished, and cannot be currently under review of consideration for publication in any journal.

## ROSE EXCELLENCE IN RESEARCH AWARD

*Submission deadline: September 1, 1999*

The purpose of this award is to recognize and reward a physical therapist who has made a significant contribution to the literature dealing with the science, theory, or practice of orthopaedic physical therapy. The submitted article must be a report of research but may deal with basic sciences, applied science, or clinical research.

Contact the Orthopaedic Section office for more information pertaining to the above mentioned awards, as well as the other benefits and services offered to Orthopaedic Section members!

Orthopaedic Section, APTA, Inc.  
2920 East Avenue South, Suite 200  
La Crosse, WI 54601  
800/444-3982 \* 608/788-3965 (fax)  
Ltoedter@centuryinter.net



# REQUEST FOR PROPOSALS

## ORTHOPAEDIC SECTION, APTA, INC.

# CLINICAL RESEARCH GRANT PROGRAM

**Purpose:** The Orthopaedic Section must support its members by funding studies designed to systematically examine orthopaedic practice issues. The purpose of this grant program is to address the urgent need for clinical research in orthopaedic physical therapy.

**Targeted Recipients of the Grant Program:** The grant program is designed to provide funding for any Orthopaedic Section member who has the clinical resources to examine a well-defined practice issue, but who needs some external funding to facilitate the completion of a clinical research project.

**Studies Eligible for Funding:** The four types of studies that will qualify for funding are studies that: 1) examine the effectiveness of a treatment approach on a well-defined sample of patients with orthopaedic problems; 2) examine patient classification procedures for purposes of determining an appropriate treatment; 3) further establish the meaningfulness of an examination procedure or a series of examination procedures used by orthopaedic physical therapists; and 4) examine the role of the orthopaedic physical therapist in the health care environment. Authors must stipulate which purpose their grant is designed to address.

**Categories of Funding:** Funding will be divided into two categories:

**Type I Grant Funding:** \$1,000.00 maximum

This program is designed for therapists who require only a small amount of funding for a project or are in the process of developing a project. The funds in this program will be used for pilot data collection, equipment and consultation.

**Type II Grant Funding:** \$5,000.00 maximum

This program is designed for therapists who are ready to begin a project but need additional resources. The grant may be used to purchase equipment, pay consultation fees, recruit patients, or fund clinicians. Clinicians receiving funding from this program will be expected to present their results at CSM within 3 years of receiving funding. Recipients will receive \$300.00 to allay costs associated with presenting at CSM.

### Criteria for Funding: Type I Grant

- A specific and well-designed purpose that is judged to be consistent with the four types of studies eligible for funding and described above
- The sample studied must include patients. For studies examining the role of the orthopaedic physical therapist in the health care environment, the sample studied would be therapists involved in the delivery of care
- Priority given to projects designed to include multiple clinical sites
- Priority given to studies examining treatment effectiveness
- Institutional Review Board approval from participating site(s) and letter of support from facility(ies) participating in the study
- Principal investigator must be an Orthopaedic Section member
- Priority given to projects that are currently not receiving funding
- The funding period will be 1 year

### Criteria for Funding: Type II Grant

Criteria are the same as listed above for the Type I Grant, plus the following:

- Evidence of some pilot work
- The funding period will be 1 year, renewable for up to 3 years, if judged to be appropriate

**Determination of the Award:** Deadline for submission of grant proposals is December 1, 1999. Each application should include one original and six copies of all material. The Grant Review Committee will review and evaluate each eligible application. A total of \$30,000 is budgeted for grants each year (five at \$1,000 and five at \$5,000). All applicants will be notified of the results by March 1, 2000.

**To receive an application, call or write to:** Orthopaedic Section, APTA, Inc.  
2920 East Ave. South, Suite 200  
La Crosse, WI 54601

# Request for Recommendations for Orthopaedic Section Offices

The Orthopaedic Section of the APTA needs your input for qualified candidates to run for the offices listed below. If you would like the opportunity to serve the Section or know of qualified members who would serve, please fill in the requested information. Return this completed form to the Section office by September 20, 1999. The Nominating Committee will solicit the consent to run and biographical information from the person you recommend.

\_\_\_\_\_  
(Print Full Name of Recommended Nominee)

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
(Area Code) Home Phone Number

\_\_\_\_\_  
(Area Code) Office Phone Number

is recommended as a nominee for election to the position of:

**CHECK THE APPROPRIATE POSITION:**

DIRECTOR (3 yr. term)

Takes on responsibilities and duties and acts as liaison to various committees as designated by the President.

NOMINATING COMMITTEE MEMBER (3 yr. term; 2 yrs. as member, 1 yr. as Chair)

Should have broad exposure to membership to assist in formation of the slate of candidates.

Nominator: \_\_\_\_\_

Address: \_\_\_\_\_

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

PLEASE RETURN BY SEPTEMBER 20, 1999 TO: Tara Fredrickson  
Orthopaedic Section, APTA  
2920 East Avenue South, Suite 200  
La Crosse, WI 54601

## Want to Get Involved?

The Orthopaedic Section, APTA, Inc. is currently looking for persons interested in serving the Section on a new committee—Membership. Member recruitment and retention was one focus of the 1999 Component Leadership Seminar, and APTA is encouraging all Chapters and Components to form membership committees. If you would be interested in serving on this committee, please call or e-mail the Section office. Or if you prefer, you can go to the Section's Website and let us know you are interested.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

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# Instructions To Authors

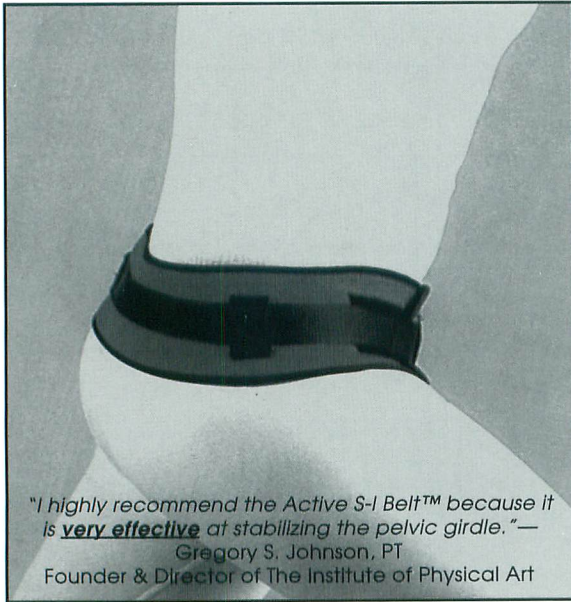
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**Susan A. Appling, MS, PT, OCS, Editor**  
**Sharon L. Klinski, Managing Editor**  
**800/444-3982**

1. *Orthopaedic Physical Therapy Practice (OPTP)* will publish articles pertaining to clinical practice. Articles describing treatment techniques as well as case studies and reviews of literature are acceptable.
2. Manuscripts should be reports of personal experiences and written as such. Though suggested reading lists are welcomed, references should otherwise be kept to a minimum with the exception of reviews of literature.
3. Two copies of the manuscripts should be submitted along with a 3½" disk with the document saved as Microsoft word or ascii. They should be double spaced, with one-inch margins on each side. The title page should include the author's name, degree, title, place of work, corresponding address, phone and FAX numbers, and email address. The manuscript should be sent to: *Orthopaedic Physical Therapy Practice*, ATTN: Managing Editor, 2920 East Avenue South, Suite 200, La Crosse, WI 54601-7202.
4. Black and white photographs to accompany the texts should be glossy 5x7. A photo release form must accompany any photographs where patients may be seen. Any tables that might add to the usefulness of the article are also welcome.

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