

# ORTHOPAEDIC

# PHYSICAL THERAPY PRACTICE

THE MAGAZINE OF  
THE ORTHOPAEDIC SECTION, APTA

VOL. 16, NO. 2

2004



*Celebrating  
30 Years*

 **APTA**  
American Physical Therapy Association  
*The Science of Healing. The Art of Caring.*



# ORTHOPAEDIC PHYSICAL THERAPY PRACTICE

## TABLE OF CONTENTS

### IN THIS ISSUE

- |    |   |
|----|---|
| 7  | Appreciate the Past, Celebrate the Present, and Look to the Future<br><i>William G. Boissonnault, PT, DHSc</i>  |
| 11 | Case Report: Evaluation and Treatment of a Patient with Patellofemoral Pain and Accompanying Lateral Tracking of the Patella<br><i>Cynthia Webmeyer, SPT, Scott Simpson, PT</i> |
| 15 | Case Report: Rehabilitation Outcomes in a Patient Following Implant of a UniSpacer® for Chronic Knee Pain<br><i>Rachel Dowler, SPT, Tena McGrew, ATC, SPT</i>                   |
| 19 | Exercises for Patients with Chronic Low Back Pain<br><i>J. Adrienne McAuley, PT, OCS</i>  |
| 23 | Practice Affairs Corner<br><i>Stephen McDavitt, PT, MS, FAAOMPT</i>   |
| 28 | 2004 CSM Award Winners  |

### REGULAR FEATURES

- |    |  |
|----|--|
| 5  | Editor's Corner                          |
| 6  | President's Message                      |
| 24 | Book Reviews                             |
| 29 | CSM Annual Business Meeting Minutes      |
| 30 | CSM Board of Director's Meeting Minutes  |
| 33 | Occupational Health SIG Newsletter       |
| 35 | Foot and Ankle SIG Newsletter            |
| 36 | Performing Arts SIG Newsletter           |
| 39 | Pain Management SIG Newsletter           |
| 41 | Animal Physical Therapist SIG Newsletter |
| 52 | Index to Advertisers                     |

### MISSION

The mission of the 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 quality patient/client care and promoting professional growth through:

- enhancement of clinical practice,
- advancement of education, and
- facilitation of quality research.

## PUBLICATION STAFF

### EDITOR

Christopher Hughes, PT, PhD, OCS

### ADVISORY COUNCIL

G. Kelley Fitzgerald, PT, PhD, OCS

Joe Kleinkort, PT, MA, PhD, CIE

Barb McKelvy, PT

Becky Newton, MSPT

Julie O'Connell, PT

Paul Seth, PT

Stephen Paulseth, PT, MS

Gary Shankman, PTA, OPA-C, ATC

Gary Smith, PT, PhD

Michael Wooden, PT, MS, OCS

### MANAGING EDITOR & ADVERTISING

Sharon L. Klinski

Orthopaedic Section, APTA

2920 East Ave. So., Suite 200

La Crosse, Wisconsin 54601

800-444-3982 x 202

608-788-3965 FAX

Email: [sklinski@orthopt.org](mailto:sklinski@orthopt.org)

*Orthopaedic Physical Therapy Practice* (ISSN 1532-0871) is the official magazine of the Orthopaedic Section, APTA, Inc. Copyright 2004 by the Orthopaedic Section/APTA. Nonmember subscriptions are available for \$30 per year (4 issues). Opinions expressed by the authors are their own and do not necessarily reflect the views of the Orthopaedic Section. The editor reserves the right to edit manuscripts as necessary for publication. All requests for change of address should be directed to the La Crosse Office.

All advertisements which appear in or accompany *Orthopaedic Physical Therapy Practice* are accepted on the basis of conformation to ethical physical therapy standards, but acceptance does not imply endorsement by the Orthopaedic Section.

*Orthopaedic Practice* is indexed by Cumulative Index to Nursing & Allied Health Literature (CINAHL).

**Publication Title:** *Orthopaedic Physical Therapy Practice*

**Statement of Frequency:** Quarterly; April, June, August, and December

**Authorized Organization's Name and Address:** Orthopaedic Section, APTA, Inc., 2920 East Avenue South, Suite 200, La Crosse, WI 54601-7202

# Orthopaedic Section Directory

## OFFICERS

<b>President:</b> <b>Michael T. Cibulka, PT, MHS, OCS</b> Jefferson County Rehab & Sports Clinic 1330 YMCA Drive, Suite 1200 Festus, MO 63028 (636) 937-7677 (Office) (636) 931-8808 (FAX) mcibulka@earthlink.net Term: 2004 - 2007	<b>Vice President:</b> <b>Thomas G. McPoil, Jr., PT, PhD, ATC</b> 1630 W University Heights Dr South Flagstaff, AZ 86001 (928) 523-1499 (928) 523-9289 (FAX) tom.mcpoil@nau.edu Term: 2004-2007	<b>Treasurer:</b> <b>Joe Godges, DPT, MA, OCS</b> Kaiser PT Residency & Fellowships 6107 West 75th Place Los Angeles, CA 90045-1633 (310) 215-3664 (Office) (310) 215-0780 (FAX) godges@msn.com Term: 2002-2005	<b>Director:</b> <b>James Irrgang, PT, PhD, ATC</b> University of Pittsburgh Department of Physical Therapy Sennett at Atwood Streets Pittsburgh, PA 15260 (412) 432-1237 (Office) (412) 647-1454 (FAX) irrgangj@msx.upmc.edu Term: 2003-2006	<b>Director:</b> <b>Gary Smith, PT, PhD</b> St. Lukes Rehabilitation Institute 711 South Cowley Spokane, WA 99202 (509) 220-5923 (Office) (509) 473-5535 (FAX) smithgj@st-lukes.org Term: 2002-2005
---	--	---	--	---

## CHAIRS

<b>MEMBERSHIP</b> <b>Chair:</b> <b>Scott Adam Smith, MPT</b> 29 Lawrence Street Hicksville, NY 11801 (516) 681-5647 (Office) smittyp14@aol.com  <i>Members: Hunter Bowie, Julia Chevan, John Childs, Melissa Corriveau, Byron Russell, Terry Trundle</i>	<b>EDUCATION PROGRAM</b> <b>Chair:</b> <b>Ellen Hamilton, PT, OCS</b> 724 Montclair Road, Ste 100 Birmingham, AL 35213 (205) 599-4500 (205) 599-4535 (FAX) ellen.hamilton@bhsala.com  <b>Vice Chair:</b> <b>Beth Jones, PT, MS, OCS</b>  <i>Members: Dee Daley, Bob Duwall, Deborah Gross-Saunders, Kristinn Heindrichs, Joe Kleinkort, Deborah Lechner, David McCune, Tara Manal, Cheryl Mauer, Stephen Paulseth, Chris Powers, Christopher Scott, Jeff Stenbach</i>	<b>INDEPENDENT STUDY COURSE</b> <b>Editor:</b> <b>Mary Ann Wilmarth, DPT, MS, OCS, MTC, CertMDT</b> 10 Nollet Dr Andover, MA 01810-6312 (978) 682-8802 mwilmarth@comcast.net  <b>Managing Editor:</b> Kathy Olson kmolson@orthopt.org (See Office Personnel)	<b>ORTHOPAEDIC PRACTICE</b> <b>Editor:</b> <b>Christopher Hughes, PT, PhD, OCS</b> School of Physical Therapy Slippery Rock University Slippery Rock, PA 16057 (724) 738 2757 cjh@nauticom.net  <b>Managing Editor:</b> Sharon Klinski sklinski@orthopt.org (See Office Personnel)
<b>RESEARCH</b> <b>Chair:</b> <b>G. Kelley Fitzgerald, PT, PhD, OCS</b> University of Pittsburgh Department of Physical Therapy 6035 Forbes Tower Pittsburgh, PA 16260 (412) 383-6643 (Office) (412) 383-6629 (FAX) kfitzger@pitt.edu  <i>Members: Paul Beattie, Lori Michen, Sheri Silfies</i>	<b>ORTHOPAEDIC SPECIALTY COUNCIL</b> <b>Chair:</b> <b>Robert Johnson, PT, MS, OCS</b> 406 N Brainerd LaGrange, IL 60526 (708) 579-0423 robertjohnson406@sbcglobal.net  <i>Members: Col. Nancy Henderson, Rob Landel</i>	<b>PRACTICE</b> <b>Chair:</b> <b>Robert (Bob) H Rowe, PT, DMT, MHS, FAAOMPT</b> 126 Oak Leaf Drive Slidell, LA 70461-5006 (504) 568-4285 (504) 568-6552 (FAX) rrowe@lsuhsc.edu  <i>Members: Bill Boissonnault, Joe Farrell, Helene Fearon, Jay Irrgang, Aimee Klein, Stephen McDavitt, Ken Olson, Gary Smith, Richard Smith</i>	<b>PUBLIC RELATIONS</b> <b>Chair:</b> <b>Richard Watson, PT</b> 1266 Berkshire Lane Barrington, IL 60010-6508 (847) 726-9181 (703) 935-4754 (FAX) rick@mrpt.com  <i>Members: Amanda Adams, Cheryl Dimapasoc, Michelle Spicka, Michael Tollan</i>
<b>FINANCE</b> <b>Chair:</b> <b>Joe Godges, DPT, MA, OCS</b> (See Treasurer)  <i>Members: John Childs, Steve Clark, Pam White</i>	<b>AWARDS</b> <b>Chair:</b> <b>Thomas G. McPoil, Jr., PT, PhD, ATC</b> (See Vice President)  <i>Members: Mari Bosworth, Jerome Danoff, Nicholas Quarrier, Kim Schoensee</i>	<b>JOSPT</b> <b>Editor-in-Chief:</b> <b>Guy Simoneau, PT, PhD, ATC</b> Marquette University P.O. Box 1881 Milwaukee, WI 53201-1881 (414) 288-3380 (Office) (414) 288-5987 (FAX) guy.simoneau@marquette.edu  <b>Executive Director:</b> <b>Edith Holmes</b> editbolmes@jospt.org	<b>NOMINATIONS</b> <b>Chair:</b> <b>Susan Michlovitz, PT</b> 515A W Gravers Lane Philadelphia, PA 19118-4132 (215) 707-5733 (215) 707-7500 (FAX) drsoose5749@aol.com  <i>Members: Leza Hatch, Pamela Duffy</i>
<b>SPECIAL INTEREST GROUPS</b> OCCUPATIONAL HEALTH SIG <i>Deborah Lechner, PT, MS - President</i> FOOT AND ANKLE SIG <i>Stephen G Paulseth, PT, MS, SCS</i> PERFORMING ARTS SIG <i>Jeff Stenbach, PT, OCS - President</i>	PAIN MANAGEMENT SIG <i>Joe Kleinkort, PT, MA, PhD, CIE - President</i> ANIMAL PT SIG <i>Deborah Gross-Saunders, PT - President</i>	<b>APTA BOARD LIAISON</b> James M. Dunleavy, PT, MS jamesdunleavy@apta.org  <b>2004 HOUSE OF DELEGATES REPRESENTATIVE</b> Stephen C.F McDavitt, PT, MS	<b>Orthopaedic Section Website:</b> www.orthopt.org Bulletin Board feature also included. Check it out soon!

## OFFICE PERSONNEL

Orthopaedic Section, APTA, Inc., 2920 East Avenue South, Ste. 200, La Crosse, WI 54601-7202, (800) 444-3982 (Office), (608) 788-3965 (FAX)			
<i>Terri DeFlorian, Executive Director</i>	x 204	<i>tdeflorian@orthopt.org</i>	<i>Kathy Olson, Managing Editor HSC</i>
<i>Tara Fredrickson, Executive Associate</i>	x 203	<i>tfred@orthopt.org</i>	<i>Jessica Hemenway, Education/Program Coordinator</i>
<i>Sbaron Klinski, Managing Editor J/N</i>	x 202	<i>sklinski@orthopt.org</i>	<i>Linda Calkins, Project Assistant</i>
			x 213 <i>kmolson@orthopt.org</i>
			x 216 <i>jjbemenway@orthopt.org</i>
			x 215 <i>lcalkins@orthopt.org</i>

# Editor's Corner

## Introductions, Salutations, and What's Ahead

This issue represents a 'changing of the guard' as I replace Susan Appling as Editor of *OP*. I am looking forward to building upon the fine work that Susan and the staff at *OP* have done thus far. I would like to thank Susan for her hard work and dedication as Editor over the past 6 years and also the time she has spent getting me up to speed on the responsibilities of the editor for this publication. The responsibility is a big one, but I am happy and enthusiastic about serving the members of this great Section.

My background is diverse. I performed my doctoral work at University of Virginia where I was involved in the study of wheelchair propulsion biomechanics. I have been on faculty at Slippery Rock University since 1990. I have taught clinical courses, basic science courses, and also research courses within the School of Physical Therapy. I serve as manuscript reviewer on several peer-reviewed publications including: *JOSPT, Medicine and Science in Sports and Exercise, Archives of Physical Medicine and Rehabilitation*, and the *Journal of Strength and Conditioning Research*. I also serve as Editorial Review Group Chair for Doody Enterprises, a book review database service and sit on the editorial board for *PT Magazine*. In addition to academic duties, I continue to engage in clinical practice on a regular basis at an outpatient sports medicine clinic. I received my OCS board certification in 2001. My current clinical and research interest lies in the evaluation and treatment of shoulder pathology.

My varied experiences have given me a great appreciation for how much success can be obtained through collaboration and working with fine people. Obtaining my goals to insure continued success with *OP* will not be by my own sole efforts but by the contribution of many. Being an active contributor is a rewarding experience, and I would like to encourage you to disseminate your ideas through *OP*. Your contribution in the magazine can serve as a viable starting point in fine tuning your writing skills for other scholarly pursuits as well. The magazine is a unique blend of clinical topics and business news. Articles of interest can be in the form of case reports, review of literature submissions, descriptions of clinical interventions, pilot studies, and results of faculty-student research projects. The reports submitted by each SIG will keep you up to

speed on what's going on in the Section.

We have solicited reader input in the past and will continue to invite comments and opinion. Your input is important to us. Readers volunteered their opinions in a recent survey. The results of the brief survey are listed below:

Question	Yes	No
Do you feel <i>OP</i> is a member benefit?	828	14
Would you prefer Internet-based copy only?	201	536
Do you prefer the hard copy version?	596	131

Overall, the written comments were very positive and reflect how many of you read *OP*. A surprising result was the number of respondents who would like to continue receiving a hard copy version. Specific comments related to not wanting to be tied to the computer to read the issue and your willingness to share information with others.

Based on the responses received, I think it's important to clarify that *if* we did move to an online version, we would include the ability to print and save the entire issue similar to the archived issues on the website. Tara Fredrickson, Executive Associate, Orthopaedic Section, APTA and manager of the website has done a great job providing an informative website for the Section.

Publishing a magazine can be a fiscal challenge. In today's era of budgetary restraints, the staff of *OP* and I feel obligated to continue to investigate the best way to deliver the issues in a cost effective manner to offset expenses related to print and distribution. To offset expenses we will continue to recruit appropriate advertisers for the magazine. If you know of anyone who may benefit from placing an ad in *OP*, please have them contact the Section office or direct them to the website for the insertion order form at <http://www.orthopt.org/membersonly/publications/adop.asp>. We value their support and the information they bring to the members.

The Combined Sections Meeting in Nashville was well attended. How stimulating it was to be in the company of professionals who are so dedicated to meeting and exchanging ideas as well as providing service to the association.

If you were there, thanks for attending; if you were unable to attend, then we hope to see you next time. Even though challenges continue to face the practice of physical

therapy there was a general optimism regarding opportunities and strategies to thrive in the future. I am confident *OP* can play a role by continuing to publish relevant and interesting clinical articles as well as serve as a forum for each SIG to distribute information, Section reports, and business issues. In the future I intend to run more 'theme issues.' The recent issue on backpack use and safety was very well-received, and we would like to continue meeting your needs. Do not hesitate to contact me if you would like to see more specific coverage of a certain topic.

So what will be new? One recent change will be cosmetic. There has been ongoing discussion on changing the cover design. Even though this does not affect content, a new cover style can reflect changing times. Our current cover has been around awhile so it may be time for a change. Watch for a new look soon. The overall content of the magazine will remain the same.

My other goal will be to promote additional resources provided on the Section website located at [www.orthopt.org](http://www.orthopt.org). Did you know that there is a discussion board on the website? What a great place to interact with your colleagues. As of recent, the discussion board has been getting minimal activity so I would like to encourage many of you to check out the content on a timely basis and also post to it. You may be surprised at how helpful the forum can be to exchange ideas and opinions with colleagues. As a member of the website advisory panel directed by Dr. Jay Irrgang, I hope to further integrate *OP* and the web-based services offered through the Section. I believe both forms of communication can be a valuable resource for members.

We have a variety of topics in this issue. Wehmeyer and Simpson present a patient case for treatment of patellar tracking dysfunction. Dowler and McGrew discuss rehabilitation management of the patient with chronic knee pain following placement of a Unispacer. McAuley addresses therapeutic exercise for patients with chronic pain. Finally, McDavitt gives his opinion on the transformation to the DPT based on Vision 2020.

Once again, I welcome you to become a contributor to *OP* and to share your feedback on how we can make the publication applicable to your needs. I hope you enjoy the latest issue of *OP*.



Christopher Hughes, PT, PhD, OCS  
Editor, *OP*

# President's Message

I just got back from the Missouri Historical Society where they were displaying a special exhibit on Lewis and Clark's expedition up the Missouri River. On May 14, 1894, Meriwether Lewis and William Clark along with 31 other men boated up the Missouri from my home town of St. Louis, MO. They left on a journey that took them over 2 years to complete. Amazingly, only one man in their entourage died, Sergeant Charles Floyd, and that was from an acute case of appendicitis. Along the way they were introduced to new cultures, new ideas, new plants and animals, and a whole new world. They encountered problems from disorderly conduct, drunkenness, starvation, sickness, and communication problems with the native Indians as well. Lewis, who acted as the Corp of Discoveries physician, would 'bleed' his men, apply a mercuric compound to treat syphilis, or give purgatives for a myriad of different problems. My how health care has changed! Lewis and Clark's journey showed us the persistence of a determined group of pioneers who had a firm goal in mind. Two hundred years later, we are in the midst of an exciting journey, one of discovery and enlightening. The Orthopaedic Section's journey is heralded by its mission, vision, and strategic plan. While our updated strategic plan did not take 2 years to complete, it did involve a group of dedicated members who volunteered their valuable time to put the plan together.

Lewis and Clark's journey was a quest to find the supposed Northwest Passage. They also were on a scientific expedition, a journey to discover much about this new part of our country. As the Orthopaedic Section Board embarks on its journey, I would like to introduce some of the many new faces that you will hear from. First, we welcome Tom McPoil, PT, PhD, our new Vice President and say goodbye to Lola Rosenbaum. Also, we welcome Robert Rowe who replaces the punctilious, knowledgeable, and expatiator (for those who have never read Steve's notes they are like reading the Lewis and Clark Journals, exacting and very complete) Steve McDavitt as Practice Committee Chair. Susan Appling, our long time *OP* Editor, has retired and we welcome Chris Hughes as her replacement. Michael Wooden, our Membership Chair, has left us in good hands with the young and energetic Adam Smith while Terry Randall our Public Relation Chair handed over the baton to Rick Watson. And last but not least, Tim Flynn has finished his term on the

Nominating Committee and we welcome Susan Michlovitz as Chair. This group got together one last time recently to create our Strategic Plan for the next 3 years. Please visit the plan located on our website ([orthopt.org](http://orthopt.org)) and voice your opinion by emailing us; we need your input.

Thomas Jefferson loved new scientific gadgets; he tried to get Lewis to take a newly developed sextant with him on his journey but Lewis refused the gift because its large size made it impractical to carry. Likewise, President Jefferson would have loved the Combined Sections Meeting in Nashville, TN. From a digital caliper that was ingeniously used to measure the Insall-Salvati ratio to determine if patella alta or baja exists to a well-crafted nifty device that could measure medial/lateral patellar motion, President Jefferson would have had a grand old time.

The Combined Sections Meeting was wonderfully attended. It was the Orthopaedic Section's 30<sup>th</sup> anniversary, and a good time was had by all complete with country music. The programming at CSM was superb, a special thanks goes out to Paul Howard, our outgoing Education Chair, and incoming Education Chair, Ellen Hamilton along with the Education Committee members: Mark Cornwall, Dee Daley, Bob Duvall, Kristinn Heindrichs, Joe Kleinkort, Lynn Medoff, Chris Powers, Gary Shankman, and Patty Zorn. When Lewis and Clark hit the Marias River in Montana, they did not know which branch was the Missouri River and which was the Marias tributary, thus they split into 2 groups to solve this problem. In the Orthopaedic Section we have 2 groups that also 'solve' the problem of education at CSM, the Research Committee and the Education Committee. The Orthopaedic Section's Research Committee headed by Kelly Fitzgerald along with the Research Committee members—Paul Beattie, Lori Michen, and Sheri Silfies—was responsible for all of the great poster and platform presentations. It was great to see all of the posters and platforms that were supported by the Foundation of which the Orthopaedic Section is such a strong supporter. I was even more ebullient when I noted that most presentations were clinically significant. We are truly starting to mature as an evidenced-based profession and the great research at CSM really proved that point. The Education Committee, Special Interest Groups, and Education Groups also provided and assisted in the organization of excellent programming during this year's CSM.

Lewis and Clark's expedition provided to be one fantastic course of study. Our Home Study Courses, now called Independent Study Courses, are again doing very well. We have had 1,529 new purchases in calendar year 2003, a 12% increase over 2002. As of this writing, our 2004 registrations total 713! Our bottom line is starting to look better. For a review of this and all other fiscal items, please visit the Treasurer's Report found on the section website at [www.orthopt.org](http://www.orthopt.org).

Our remaining commitment of \$112,500 promised to the Foundation for Physical Therapy is to help fund the Clinical Research Network. The Clinical Research Network is a high priority and an important part of our strategic plan to foster growth in physical therapy practice. We are already seeing the fruits of our research expenditure and hope to see much more in the near future.

Within the last few years, we have had reduced cash flow primarily from diminished revenue and stock market returns. The Section office also has had to eliminate outside contractors. Our financial situation is slowly improving. When we achieve more financial stability, we will once again take a look at how to best allocate our resources.

I would like to extend sincere congratulations to this year's awards winners: Paris Distinguished Service Award, William Boissonnault; James A. Gould Excellence in Teaching Orthopaedic Physical Therapy Award, Donald Neumann; Outstanding Physical Therapy Student Award, John Popovich; The Rose Excellence in Research Award, Dr. Timothy Flynn and colleagues. For complete details of why these individuals are so deserving of these awards, please refer to page 25.

I am looking forward to the next 3 years as President. Our profession is one that possesses the purest virtue, helping people to overcome disability, and succeed to their highest potential. The new discovery of plants, animals, and geography that Lewis and Clark brought home to Jefferson was new and exciting. Likewise, the new evidence I observed at CSM this year or the information and data I just read in *JOSPT* is equally sublimely grand to me (William Clark uses the term sublimely grand to describe the Missouri falls in Montana). When the corp nearly starved crossing the Bitter Root Mountain range, they nearly lost all hope of finding the Columbia River, but their persistence and serendipitous luck saved them. The Orthopaedic Section must

*(Continued on page 14)*

# Appreciate the Past, Celebrate the Present, and Look to the Future

William G. Boissonault, PT, DHSc

This Paris Distinguished Service Award lecture was presented at the Combined Section's Meeting in Nashville, Tennessee on February 7, 2004.

What a tremendous honor this is for me tonight. Words are difficult to find to describe my gratitude to the Orthopaedic Section's Executive Committee, the Awards Committee, and others of you who had a hand in this wonderful recognition. Receiving a Service award for activities from which I have grown so much, both professionally and personally, hardly seems fair. Accepting this award is something I do with a great deal of pride. Part of that feeling comes from joining a list of special individuals, the previous awardees, all of whom I have a great deal of respect for and I had the opportunity to work with many of them very closely during my tenure as Section President. I learned a great deal from sharing the experience with Nancy White, Carol Jo Tichenor, Joe Farrell, and Dorothy Santi, and also had a lot of fun at the same time. My feelings of pride also come from receiving an award associated with Dr. Stanley Paris. I entered his Master of Science Program in 1981, practicing at the level of technician, and 18 months later left Atlanta with the skills and attitude that allowed me to develop into a clinician. More germane to this award though, and equally important to my then newfound clinical abilities, I left that program with a deep sense of pride in being a physical therapist. For the first time I began to appreciate that I had joined a profession, not just any group, but a profession filled with outstanding and talented individuals. For the first time, I began to truly appreciate what it meant to be a professional, including the responsibilities and characteristics associated with that title. I also left the program with a sense of obligation to be active in our professional association. Contributing to the Association and the profession became an expectation, an attitude that has carried over to today. I will be forever grateful to Stanley for instilling in me this sense of pride and obligation.

Besides feeling honored and grateful tonight, I am also tremendously relieved to have this public forum. At the 2001 Section Business Meeting, my final meeting as President, I thanked and acknowledged a multitude of people for all their efforts over the previous 5 to 6 years. Of

course, the danger of having such a 'thank you list' is omitting people that probably should have been at the top of the list. Well that is exactly what I did. I neglected to say even one word about my family and the sacrifices they made over those 6 years. They let me know about this omission, and rightly so. So, I had hoped that one day I would have the opportunity to publicly acknowledge Jill and my kids—Josh, Jacob, and Eliya—and thank them for their support and understanding of the many phone calls, long hours, and travel. The four of them also made sure I stayed grounded during those 6 years. If there was any chance I was going to get a big head over being President of the Orthopaedic Section, it ended the day Terri DeFlorian called me and said, "Bill you've been elected." The people at work were great about it, genuinely pleased and excited about the news. So, I was driving home feeling pretty good about myself, thinking, "Geez President of the Orthopaedic Section; I wonder what my kids will think etc, etc." As I was walking into the garage, the kids came pouring out of the back door with Jill right behind pushing them along towards the car. My initial thought was "Ah, a welcoming party." Then I realized Jill was carrying the plunger. She hands it to me and says, "The toilet is plugged; we have to run." The kids yelled out, "Yeah dad the toilet is plugged." I thought, "So this is what is like to be President of the largest Section of the APTA." My hat size started shrinking. It was a team effort during those years and tonight I share this award with them. The magnitude of this special evening for us as a family is marked by the fact that my oldest son is here minus his Chicago Cubs hat and I am wearing regular shoes.

I started attending CSM (actually called Mid-Winter Meeting back in those days) and the Section Business Meeting in the mid 1980s. I was essentially a wallflower at those meetings, too nervous and shy to raise my hand to ask a question or participate in any discussion. But I found the meetings exciting; the Executive Committee and Committee Chairs appeared to be having a lot of fun, and the issues being discussed seemed relevant and important. Attending these meetings led to my official involvement in the Section, which in some ways has come full circle. My current position, Practice Committee member, is where I started in 1991. I served under a wonder-

ful Chairperson and human being—Garvice Nicholson. Garvice opened my eyes to the importance of practice issues related to our profession's future and how what transpired in one state could impact practice in multiple states. He also provided considerable guidance on issues such as diagnosis, direct access, Chiropractic legislative challenges, and spearheaded the Section's drive to produce a Manipulation Position Statement. More recently, I served under another Practice Committee Chair who has been the standard bearer for our practice rights the last number of years—Steve McDavitt. Steve's passion and commitment to our profession leaves me thinking, "I am glad this guy is on our side!" I have had this same thought numerous times watching Stanley Paris defend our profession in front of a potentially hostile group.

At almost the same time I started working under Garvice, Anne Campbell, the Nominating Committee Chair, approached me 10 minutes before the start of the 1990 CSM Section Business Meeting and asked if I would agree to be slated for the Nominating Committee. I thought for about 10 seconds and said, "Sure, I would have a blast serving on that committee." At the time, I remember thinking what an honor it would be to serve on this committee. Of course, having served in the Section for all of these years, I now know that Anne was probably just desperate to find a warm body to fill the slate, and there I was! Then later during the Business Meeting, Anne started giving her committee report and announced the slate for the Nominating Committee, and she mentioned **two names** on the slate! My thought was, "Wait, am I running against someone, and it is someone that I have a ton of respect for?" My vision of serving the Section evaporated as quickly as it had developed. I was so naive back in those days, but I managed to get elected, which gave me an opportunity to attend Board of Directors Meetings and to see Section governance in action. I left with the same impression as before, that those involved seemed to be having a lot of fun, and were discussing relevant and important issues.

In 1995, my professional life took an amazing turn; I was elected President of the Orthopaedic Section. Serving in this capacity, as I mentioned 3 years ago, was and still is the most rewarding professional experience I have had. One of the things I learned from 1995 through 2001

is that Presidents and Chairs of organizations probably get too much credit when things go well and too much blame when things don't. This is just part of the deal. The Section's successes and growth during these years were the result of a team effort, and what a team we had! The most visible members of this team were the Board of Directors, Committee Chairs, and our dynamite office staff, but dozens of other individuals chaired and served on task forces, and still others served on committees and work groups—all dedicated to advancing orthopaedic physical therapy practice, education, and research. A result of this team effort was a document that I am still very proud of, the strategic plan developed in the Fall of 1997. Fifteen individuals operating under a preamble that included the phrase, *Appreciate the Past, Celebrate the Present, and Point to the Future*, pounded out a very aggressive and broad plan, including a mission and vision that went well beyond striving to provide resources to our membership; a plan that also included a clear edict that we should be the chief advocate for orthopaedic physical therapy practice, education, and research. This strategic plan was adopted by membership following a presentation by Vice President, Nancy White at the 1998 CSM Business Meeting, and for the next 3 years, we dedicated ourselves to living up to the vision and mission, and meeting the stated goals and objectives. Being an advocate was a high priority and in part accomplished through our top-notch publications, *JOSPT* and *OP*, as well as by reaching out to those within our profession through collaborative efforts with APTA Board of Directors and staff, Chapters, Sections, and the American Academy of Orthopaedic Manual Physical Therapists, and finally by being an active participant at the House of Delegates. There were joint efforts with other Section Presidents as we strove to provide direction and leadership while representing the grassroots of the Association, our membership. Led by Public Relations Chair, Terry Randall, we also became a familiar name and sight to those outside our profession—Physician Assistants, Nurse Practitioners, and others—where we not only promoted orthopaedic physical therapy but the physical therapy profession in general. Nancy mentioned some of the 'big-ticket' activities that were a result of our efforts, but it is important to understand that these activities were made possible in large part by the foresight and financial planning that started with President, Dr. Jan Richardson and her Board, and continued with President, Dr. Annette Iglarsh and her Board. While these big-ticket activi-

ties, driven by the strategic plan, certainly brought visibility to the Section, I am just as proud of many of the 'small-ticket' events that also took place and in many cases contributed just as significantly to the progress that was made related to our overall plan.

In preparation for this night, I reflected back over the past 12 years and began to wonder if I would want the 1997 strategic plan to look any differently if it had been developed today instead of 6.5 years ago. Based upon developments in our profession over the past 3 to 4 years, my answer is a definite yes. As I just described, a major edict of the 1997 strategic plan was to reach out, hoping to establish ties and build bridges in order to better represent membership, and to open doors of practice, education, and research opportunities for our members. Although these efforts are still important, based on the magnitude of the transition associated with our move towards Vision 2020, I believe we need to turn much of our energy and efforts inwardly to our membership. I will discuss a couple of relevant issues, and then suggest possible roles Sections could play.

When I read the APTA Vision Statement for 2020, a few key phrases catch my attention—doctors of physical therapy, board certified specialists, autonomous practice, and evidence-based service. We have set some lofty and exciting goals, and the year 2020 sounds like a long ways off, lending a bit of comfort to our efforts and concerns. "We have plenty of time," is a statement I have frequently heard during my conversations with physical therapists around the country. But I personally take no comfort knowing that we have 16 years remaining in our published timetable. I hear the clock ticking louder and louder as each CSM and Annual Conference comes to a close. We have a lot of work ahead of us. I fully support the Vision 2020, but it is important that we realize that with this public declaration, our credibility as a profession is on the line. The move from the BS, PT to the MPT and MSPT caused only a minor ripple within our profession and even less on the outside. On the other hand, this move to the DPT has caused a tidal wave within our profession, and the swell is rising outside as more and more health care practitioners and organizations are getting wind of our aspirations. Our credibility is on the line. Over time, if we cannot show that our doctors of physical therapy, our autonomous practitioners, have had a positive impact on the delivery of health care, and the health and wellness of soci-

ety, I believe we will have wasted our time and resources. If we are not contributing to the delivery of health care any differently 16, 20, or 25 years from now than we are today, then the pundits who cried "self-serving and degree inflation" will deserve their day in the sun. Can we succeed with society being the winner? I am confident the answer can be yes, but.....

#### WHAT MAKES YOU A DOCTOR?

I have no doubt that we can develop the core clinical examination and intervention skills necessary to practice at the desired level. In fact, in some practice areas, we are not that far off right now. But clinical skills alone are not going to guarantee success in terms of creating the desired opportunities and assuming the responsibilities we aspire to, not unless the development of these clinical skills is accompanied by a simultaneous change in our professional culture, attitudes, and personality. In my opinion, here in lies our biggest challenge. Let me give you a couple of examples. At every course and seminar I have taught this past year, I have presented the groups with a scenario and a question: "You are flying in an airplane sitting next to an Orthopedic Surgeon and the topic turns to the DPT. The surgeon asks you, "So what makes a PT a doctor? or What makes you a doctor?" How would you answer that legitimate question? As you can imagine, this question has led to some very interesting discussions in these courses and seminars. In fact, the struggle to work through this scenario and develop a reasonable initial response has been excruciatingly painful at times. Some of the recommended initial responses back to the surgeon have included: "Well, what makes you a doctor?" or "Well, I am not a doctor like you," or "I am a graduate from a DPT program." None of these particular responses are a very convincing way to begin presenting one's case. We need to be able to articulate to ourselves and to others what makes us doctors. Our reply may differ a bit depending on who our audience is: an orthopedic surgeon, a third party payer, or another physical therapist. The worst-case scenario when presented with this question is that we stumble, we hem and haw, or that our initial response is defensive, passive, or weak. You can imagine what that Orthopedic Surgeon would say to his or her colleagues the next time the DPT comes up in their conversations. Depending on our audience, we may have only one chance to articulate a convincing reply. We ALL need to be ready for this and other similar questions, not just the DPT graduates.

## **BOARD CERTIFIED SPECIALIZATION; LET'S FINISH THE JOB!**

"Physical therapy, by 2020, will be provided by doctors of physical therapy, who may be board certified specialists" is the lead sentence of the Vision Statement. Board certified specialization in Orthopaedic Physical Therapy has been a reality since 1989 and was a high priority for the Orthopaedic Section's founding members. The emphasis of the Section's and the profession's early discussions on was how to identify and recognize our clinical specialists, and at this point in time, we have a very credible written examination and wonderful ceremony in place to do so. What has been, and still is missing from our clinical specialization process though, is a formally recognized method or route of training. How do we become clinical specialists? How do we develop the necessary skills and attitude that goes along with being a specialist? Imagine having a conversation with a Family Practice Physician and it comes up that you are an OCS. The physician asks, "What did you do to become board certified?" The reply would be, "I passed a written examination." The next question would be, "What did you have to do to sit for the examination"? If 10 physical therapists were asked this question, the Physician may get 10 very different responses, above and beyond the minimum number of hours now required to sit for the examination. Potentially 10 confusing answers to the physician, considering that his or her reference point will be their own personal training, that included the standard residency and maybe fellowship experience. We missed a huge opportunity in the 1970s and 80s. In hindsight, it would have been wonderful if we had worked on the development and adoption of a formal training process leading to specialization, along with the efforts associated with developing a recognition process. We have paid a price for this oversight.

One of my primary concerns related to our transition to a doctoring profession has been, "Do we have a critical mass of mentors available to provide the training and guidance to our DPT students and new graduates?" If our first and second-generation DPT graduates are practicing just like previous generations of BS, PT, and MPT graduates, we will have a very hard time fulfilling our Vision. My generation of BS, PTs was taught that physical therapists do not diagnose, and we established our prognosis by looking at the prescription the patient brought with them. This is not exactly the message we want our DPT students to be receiving. The clinical education piece for our 'new' doctors is vital to

the overall success of our entire transition, as is the graduate's first year or two of clinical experience. Residency and fellowship training have been at the core of how Medicine has developed their clinical specialists for decades. Most physicians I have asked state that they 'became a doctor' during their residency and fellowship experiences, not while they were in medical school. Central to this type of training and level of professional development is a formal mentoring process. The mentoring provided to the resident is what separates clinical residency education from the continuing education or certification route of professional development. A core element of professional development, the formal mentoring process, is something we have not yet officially adopted as a profession. This is despite the efforts of multiple individuals who for years have been publicizing the virtues of mentoring, including most recently Joe Godges through his editorial in the February issue of *JOSPT*. One of the prices we now pay is the relative lack of mentors for our transition to a doctoring profession.

Besides being tied to the lack of a critical mass of mentors, I believe the fact that residency and fellowship training are not yet a part of our profession's culture has led to somewhat of an identity crisis, to some confusion as to what role our clinical specialists should have in terms of delivery of services. How often do we refer patients to our own certified specialists? Physicians refer patients to other physicians all of the time; it's a routine part of their practice. I would argue it is not yet a routine part of our practice. Do our specialists see the most challenging patients entering our practices? Do our specialists see more patients in less time than new graduates? Can our specialists provide higher quality care and save the health care system money? In some settings, the answer to these last 3 questions is yes, but in other settings, what I have witnessed is that the expectations for a certified specialist is no different than those for a new graduate. We need to clarify for ourselves, and for those outside of our profession, the role of our clinical specialist compared to that of the generalist physical therapist. I believe having a formal training process in place, leading to specialization, will help clarify by the year 2020 what role, or roles, specialist physical therapists can fulfill. Finally, I believe the lack of an adopted residency training process has contributed to our urgent need for scientific evidence to support our practice. Over the years, in medicine, much of the 'grunt work' related to medicine's clinical research efforts has been

done by Fellows and to some degree medical residents. This has helped lead to the accumulation of evidence in medicine that surpasses what most other health professions currently have, and has led to clinical research being a more accepted part of medicine's specialists' clinical practice environment; this can lead to more clinical research being done.

I would like to echo Carol Jo Tichenor's sentiments expressed during her Paris Award acceptance speech last year: "Having residency education as a career path that is supported and promoted across the profession, will automatically raise the level of practice across the profession, even for those who do not pursue a residency." The presence of a program can positively impact quality employee recruitment and retention of experienced staff, and raise the level of practice of the surrounding community." This is the ripple effect Carol Jo described. These residents and fellows, once completing their program, will have the potential to mentor not just new residents and fellows, but all practitioners with whom they come into contact, including DPT students and new graduates.

In terms of remedying some of these issues, obtaining the support for and promotion of residency training across the profession as Carol Jo proposed is a start, but I believe for Vision 2020 to become a reality, this support and promotion must lead to the profession adopting residency training as THE path leading to clinical specialist certification. This move in part over time would help remedy the lack of qualified mentors for our new DPT graduates and for the rest of us who need to get on board this train as quickly as possible. Now, a concern could be, is that we don't have enough clinical residency sites for this to become a reality. This statement is absolutely correct; as of today we don't have anywhere near the number required to put a dent into our profession's professional development needs. Despite the efforts of dozens of individuals over a 10-year span who have spread the residency gospel, led by example, and helped develop a number of dynamite resources for those interested in starting programs we have made little headway in developing new residency sites. In fact, in 2003, as a profession we added a total of 2 residencies and 1 fellowship to the list of programs Carol Jo described last year during her speech. I believe one of the solutions to our lack of numbers issue lies in the formal adoption of residency training and making a commitment to seeing that this clinical education model becomes a part of our culture.



## VISION 2020; DO SECTIONS HAVE A ROLE?

So what does all of this have to do with the Orthopaedic Section, and Sections in general? Obviously, fulfilling the aspirations of Vision 2020 does not just fall on the shoulders of the Orthopaedic Section. The issues I raise are generic, germane to everyone in our profession, but I believe if we are going to be successful, all Association Components, including the Sections, need to be active participants in this transition. So, what are some of the possible roles Sections could play?

The APTA has developed a number of excellent initiatives to help lead us towards the Vision. The question is though, even with APTA's considerable efforts, is the message reaching the ears of our profession? From what I am hearing from physical therapists in a variety of settings, many whom are members of the Association, is that it is not reaching nearly enough of our constituency. The Orthopaedic Section, with its 14,000 members has a number of outstanding existing vehicles designed to 'spread the word,' including the magazine, *Orthopaedic Physical Therapy Practice*; our web-site; conference programming; home study courses; or commentaries in the *Journal of Orthopaedic and Sports Physical Therapy*. The message can be tailored for those involved in orthopaedic physical therapy, instead of the often more generic message. Think of the potential impact of having every Section promote these Vision 2020 initiatives to their respective membership, with the messages geared specifically to the unique interests of each group! Some APTA and Section members may now hear the message a couple of times, but from different perspectives and angles, and members who missed the initial 'call' will hear it from a different source.

Related to some of the issues I raised this evening, the above information vehicles would be effective ways to promote needed dialogue and debate, and not just among physical therapists, but other professionals as well. Imagine a discussion of, "What makes you a doctor?" between an attorney, a dentist, a medical doctor, a podiatrist, a physical therapist, and a Pharm D. Not to see who is a 'real doctor,' but to learn from others while educating our colleagues as to what makes us a doctor. How about a series of written panel discussions in *OP* related to other questions such as, "Does being a doctor make you a physician?" or "Should we introduce ourselves as doctors to patients?" The same discussion could take place at a conference or through our web-site, where there could be audience participation. Maybe running

a series in *OP* and/or via a panel discussion at conferences, with representatives from multiple disciplines, where practice niche, and legal and regulatory boundary information can be exchanged, or promoting and publishing written patient cases where different physical therapists working within an interdisciplinary health care model have already assumed the various roles we hope that most physical therapists will be fulfilling by 2020. Maybe a home study course geared toward the making of a doctor of physical therapy who works in an orthopaedic setting. This course could include a monograph describing other health disciplines, or developing team building and communication skills, with an emphasis of making an effective and efficient referral. All of the above could be made relevant to orthopaedic physical therapy inpatient and outpatient practice. Who better to put this package together than the Orthopaedic Section? Brainstorm with APTA and other Sections; develop a strategic plan so resources and initiatives can be shared. We are all in this together and need to be working towards a common goal. Our credibility as a profession is on the line, and the clock is ticking.

Lastly, I would like to speak to the issue of clinical residency education and our current clinical specialist model. Through the visionary work of those who spearheaded and developed our clinical specialist recognition process, a number of tremendous documents and other valuable resources are available for our profession's drive to develop an accepted path for physical therapists' postprofessional education, growth, and development. Some of these resources were at the foundation of what has now been incorporated into our current clinical residency initiative. A great example is the *Description of Specialty Practice*, which not only acts as the guiding light for our OCS examination, but for our clinical residency curricula as well. An important link between the OCS examination and orthopaedic clinical residencies already exists. That bridge needs to be fortified and completed to help give us the best possible chance of seeing Vision 2020 come to fruition. Sections led the way for the birth of recognized specialist practice in this profession, and Sections should again lead the way to see that the job is completed, via any and all procedural routes.

### SUMMARY

Per the title of my speech, borrowed from the 1997 Strategic Plan Preamble, my intent tonight was to *Appreciate the Past, Celebrate the Present, and Look to the Future*. I have always had a deep respect

and appreciation for individuals who helped shape the past, as well as for past events themselves. If studied appropriately, history will often provide a clear path to the future in terms of what to do and what not to do. Also in terms of the past, looking back in preparation for this evening reminded me of the special individuals who influenced my involvement in this wonderful organization. In particular, Dr. Stanley Paris, who helped shape my attitude regarding service and the Association, and Garvice Nicholson and Anne Campbell, who first opened the door for my official involvement in the Section.

I cannot thank all of you enough this evening for *Celebrating the Present* with my family and I. I look out among you, and your faces bring to light memories that I will treasure forever. As the years pass by, the appreciation will grow as to how lucky I am to have had the opportunity to work with you. I understand that a single name goes on the Award plaque, but what makes this so special to me is knowing who I have shared my many Section experiences with, and knowing that I share this award with all of you.

And finally, *Looking to the Future*. An aspiring Vision should drive the Section's decision-making and activities, but at this point in our profession's evolution, it should not be an 'isolated' Section Vision, but should include the vision of the parent organization. I am not saying that the Section has to drop all of its current initiatives, but the future of the Orthopaedic Section and its membership is intimately tied to the success, or lack thereof, associated with the aspirations of Vision 2020. Sections owe it to their grassroots practice constituency to represent them well as our future is being shaped. Individual Sections, and Sections as a group, should be in the middle of all relevant discussions pertaining to Vision 2020 taking place on national and chapter levels. Only through collective input and effort from as large and diverse a group as possible, will we meet the Vision bar and timetable set by our Association.

As to my personal future in the Orthopaedic Section, I am grateful for the opportunity to remain involved as part of the Practice Committee. I am enjoying the role, as Joe Godges describes it, of being a worker bee. I also pledge to remain a resource to the Section in whatever capacity is needed, as other Past Presidents have. I am proud to be a part of the Section's history and I will be forever grateful for the honor bestowed upon me this evening. Thank you very much.

# Case Report: Evaluation and Treatment of a Patient with Patellofemoral Pain and Accompanying Lateral Tracking of the Patella

Cynthia Wehmeyer, SPT, Scott Simpson, PT

## INTRODUCTION

Patellofemoral pain is a common complaint among patients in the orthopedic setting.<sup>1</sup> It is seen in both the athletic and non-athletic populations.<sup>2,3</sup> There is an estimated prevalence of 15% to 30% in adolescents and young adults.<sup>4</sup> Females are more likely than males to experience pain in the patellofemoral joint.<sup>5</sup>

Patellofemoral pain syndrome (PFPS) is a nonspecific diagnosis that describes diffuse, aching pain in the anterior aspect of the knee.<sup>2</sup> Symptoms of patellofemoral pain are typically described as being retropatellar, with tenderness along the medial and lateral borders of the patella. Pain is often activity induced and aggravated by sports participation or tasks of ascending and descending stairs, walking, and squatting.<sup>2,6</sup> Occasionally, however, pain is experienced with prolonged sitting.<sup>7</sup> Other symptoms may include joint swelling, joint clicking, and a sensation of 'giving way.' Symptoms commonly occur in early adolescence during growth spurts or as a result of imbalance of the muscles that stabilize the knee medially and laterally. Patients are often persistent about pursuing treatment because participation in sports and other activities of daily living may be substantially affected by the pain.<sup>5</sup> However, it has been reported that patellofemoral pain often does not respond well to therapy.<sup>7</sup>

The causes of patellofemoral pain are numerous and may include trauma, osteochondritis dissecans, synovial plicae, chondromalacia, and patellofemoral malalignment.<sup>3,5</sup> One of the most common causes is lateral tracking syndrome. Some causative factors of lateral tracking of the patella include bony abnormalities, lateral retinacula tightness, iliotibial band tightness, hamstring muscle tightness, gastrocnemius tightness, elongated patellar tendon (patella alta), lower extremity malalignment, such as genu valgum, increased Q-angle, femoral anteversion, genu recurvatum, external tibial torsion, excessive foot pronation, and trauma.<sup>1,2,5</sup> Many authors have suggested that a muscle imbalance between the vastus medialis and vastus lateralis muscles also contributes to lateral tracking.<sup>1,4,5</sup> Clinicians may find painful patellar facets, excessive subtalar joint pronation, tight iliotibial

bands, decreased production of eccentric torque, and reproduction of symptoms when performing Clarke's test for patellofemoral grind.

“  
Patellofemoral pain syndrome (PFPS) is a nonspecific diagnosis that describes diffuse, aching pain in the anterior aspect of the knee.  
”

Nonoperative treatment of patellofemoral pain is effective in most patients.<sup>5</sup> Conservative treatment typically emphasizes pain control, muscle strengthening, stretching, and activity modification.<sup>4</sup> The initial treatment for patellofemoral pain includes quadriceps strengthening through straight leg raises, quadriceps muscle isometrics, and short arc terminal extension exercises.<sup>3,5</sup> Alleviating stress on the subchondral bone and other irritated structures presumably allows remission of the symptoms.<sup>5</sup> Various bracing and taping techniques also have been designed to treat this problem.<sup>3,4,7</sup> Bracing through use of a dynamic patellar brace that exerts a medial force on the lateral surface of the patella or an infrapatellar strap also have been reported as successful techniques for reducing pain.<sup>1</sup> Patellofemoral taping, also known as McConnell taping, has been reported to be an effective technique in managing and reducing patellofemoral pain.<sup>3,8</sup> The taping process involves applying tape to the skin over the patella in a number of configurations to influence patellofemoral joint mechanics.<sup>3,8</sup> Taping is theorized to enhance control of the vastus medialis oblique (VMO), which will result in dynamic stabilization of the patella medially.<sup>2</sup> Taping is intended to serve as a customized brace that will help control lateral patellar maltracking, medial/lateral tilt, anterior/posterior tilt, glide, and rotation.<sup>13</sup> Clinicians attempt to use taping to maximize knee extensor function for sports activities and to rehabilitate patients with patellofemoral pain syndrome.<sup>9</sup>

When rest, time, and nonoperative measures fail to relieve pain, then surgical intervention may be justified.

Surgical techniques for reduction of patellofemoral pain include lateral retinacula release, capsularrhaphy, fascioplasty, tibial tubercle osteotomy, or patellectomy.<sup>2</sup> The purpose of surgery is to specifically eliminate lesions or patellofemoral imbalance and should only be chosen to fulfill such purpose. The surgeon must have a good understanding of the cause of the pain before surgery is performed.

The following is a chart review of a patient treated for a lateral tracking patella problem. Various techniques for treating patellofemoral pain were utilized on separate occasions during the treatment process.

## CASE DESCRIPTION

### Patient Diagnostic Classification

The patient selected was chosen from all patients treated by a physical therapist who is experienced in rehabilitation of knee injuries. Selection criteria included lateral tracking of the patella, patellofemoral pain with functional activities, and implementation of multiple nonoperative treatments. The patient was classified under Musculoskeletal Practice Pattern 4C-Impaired Muscle Performance. No exclusion criteria were established. The patient chosen met all selection criteria, was motivated, and was willing to be the subject for research following the conclusion of his treatment. The researcher had no impact on the treatment process.

### Examination

The patient was a 25-year-old Caucasian male with a past medical history of chronic left knee dislocation. Surgery was performed in 1994 to the involved knee because of patellar dislocation. Since that time, the patient had no occurrence of dislocation until the recent injury on May 30, 2003. The patient reported that he was playing dodge ball and was attempting to dodge the ball from a squatted position. When he turned to the right, he indicated that he felt pain in his left knee. He reports that he went to the emergency room and had x-rays taken. These were reported to be negative for fractures. For 3 days he was placed in an immobilizer brace and was given axillary crutches for ambulation. Ibuprofen was given for pain.

At the time of evaluation, the patient

reported that he was not ambulating with the crutches. During the day, he reported his knee still swelled. His knee pain increased in the anterior knee and lateral and medial parapatellar regions primarily when ascending and descending stairs, squatting, after sitting for a prolonged period of time, or when going from a sit to a stand. He stated that pain was greater with descending than ascending stairs.

### Observations

Trace effusion was noted in the involved knee, primarily in the lateral parapatellar region and superior pouch when the patient presented to the clinic for his initial evaluation. In standing position, the patient showed bilateral genu recurvatum of approximately 10°. In normal supine and sitting positions, the patient showed bilateral laterally displaced patellae (also known as grasshopper eyes), slight external rotation of patellae, lateral patellar tilt, and patella alta.

### Special tests and measures

When assessing the quadrants of the knee, an imaginary line is drawn from the superior to the inferior border and another line is drawn from the middle of the medial to the middle of the lateral borders. Quadrant mobility is then determined as the medial and lateral movement of the patella within those 4 quadrants. When assessing this patient's patellar mobility, a 3+ quadrant mobility was found in the left knee greater than the right knee, which is indicative of hypermobility.

The patella acts as a pulley for the quadriceps tendon as it crosses over the femoral condyles. Ideally, the patella slides on the femoral condyles while remaining between them. In full extension, the patella rests on the anterior surface of the distal femur. As the knee flexes, the patella should slide down on the femoral condyles and sits between them in the intercondylar notch. During flexion and extension, the patella naturally undergoes some rotation, shift, and tilt to accommodate to asymmetry of the femoral condyles. Medial-lateral stability of the patella comes from relative tension between transverse and longitudinal stabilizers. Transverse stabilizers include the medial and lateral extensor retinacula that attach to the vastus medialis and vastus lateralis muscles respectively, medial and lateral patellofemoral ligaments, and an iliopatellar band. Longitudinal stabilizers of the patella are the quadriceps tendon superiorly and the patellar tendon inferiorly which create stability through compression. Since there is a slight imbalance

between the pull of the quadriceps and the pull of the patellar ligament, the patella naturally is pulled slightly lateral during active motions. Anything that increases the lateral pull on the patella may increase the likelihood of the patella to dislocate or sublux laterally off the lateral lip of the femoral sulcus. The patella should passively dislocate medially and laterally when all structures are relaxed. This patient's patellar orientation in the supine and 90°/90° flexed positions was found to be laterally displaced along the femoral sulcus. Observation of active extension of the knee from 90° flexion to full extension showed lateral tracking as the patella exited the femoral sulcus. No lateral tracking of the patella was evident with passive extension.

Patella alta is produced when there is an excessively long patellar tendon. In this instance, the patella rests in an abnormally high position in the femoral sulcus. A high-riding patella may be a predisposing factor in patellofemoral joint problems. The patella of this patient was found to be in a slight patella alta position.

Clarke's sign is a patellar grind test. The patient lies supine with their knees extended. The examiner stands next to the involved knee and places the web of the thumb on the superior border of the patella. As the examiner applies downward and inferior pressure on the patella, the patient is asked to contract the quadriceps muscle. If the test is positive, pain will be elicited with the movement of the patella or the patient will be unable to complete the test. A positive test is indicative of chondromalacia patella. It is important to compare the results bilaterally, as the test may cause pain even to a healthy subject. Chondromalacia patella refers to softening of the cartilage on the undersurface of the patella. It can only be detected with surgical intervention. However, direct palpation of the lateral and medial edges of the patella can often reveal pain, which is frequently associated with the diagnosis. Clarke's sign was positive for pain and crepitus during this patient's evaluation.

It is normal for a knee to 'pop' or 'snap' during flexion and extension. However, when palpating along the medial and lateral margins of the patella, crepitus that feels similar to grinding sand in the joint is likely an indication of degenerative changes in the articular surfaces. Palpable pain and clicking were elicited during examination between 10° and 20° of active full knee extension in the seated position.

Two lines form the quadriceps angle, or Q-angle. One line is drawn from the center of the patella to the anterior supe-

rior iliac spine. The second is drawn from the center of the patella to the tibial tubercle when the foot is subtalar joint neutral and the knee is extended. Normally the Q-angle is 13° to 18°. Males typically have a Q-angle closer to 13°, and females typically have a Q-angle closer to 18°. An angle above 14° indicates a tendency toward less patellar stability. In addition, an angle above 18° further indicates an increased tendency toward patellar tracking dysfunction, patellar subluxation, femoral anteversion, or lateral tibial torsion. The Q-angle of this patient was measured as 20° bilaterally.

### Evaluation, Diagnosis, and Prognosis

This patient had a good prognosis for rehabilitation. He was a young, healthy male who was active in multiple extracurricular activities. His goal was to return to his normal activities of daily living and participation in sports.

### Plan of Care

The patient received physical therapy twice a week for 2 weeks, including his initial evaluation, for a total of 4 visits. Goals for treatment were as follows:

1. The patient would report no apprehension of patellar dislocation and no occurrence of dislocation.
2. A report from the patient of 2/10 or less on the Visual Analog Pain Scale with ascending or descending stairs.
3. Patient report of 3/10 or less on the Visual Analog Pain Scale with parallel squat or deep squat, and no apprehension.
4. Patient negotiates stairs up and down with no difficulty.
5. Quadriceps muscle strength of 4+/5 with manual muscle testing and no patellofemoral pain.
6. Control of lateral tracking as observed with active motion.
7. The patient would benefit from McConnell taping of the patella in the medial position to decrease pain and prevent apprehension or dislocation of the patella laterally in 2 weeks.
8. The patient would receive a DonJoy lateral-J patella brace knee sleeve (dj Orthopedics, Inc. Vista, Calif).

### Physical Therapy Intervention

Exercise was concentrated on strengthening of the VMO and reduction of excessive lateral tracking. The patient performed all activities independently, or when necessary, with verbal cuing. All therapy was provided by an orthopaedic physical therapist with 10 years of experience in treatment of knee injuries.

Initial treatment consisted of completion of the initial evaluation and education of the patient regarding his condition. The patient was advised to avoid deep squatting and ascending or descending stairs repeatedly. Medial taping, according to McConnell protocol, was performed to correct the lateral tilt and external rotation (Refer to Figures 1A-1C). A home exercise program consisting of quad sets, short-arc quads, straight leg raises, hip adduction lifts, and modified wall squats was given to the patient.

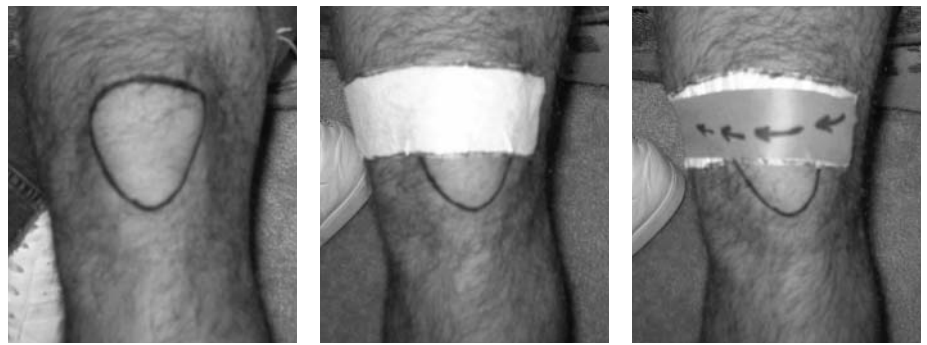
Clinic exercises included: stationary bike, quad sets, short-arc quads over a 6" towel roll, knee flexion and extension in the supine 90°/90° position, hamstring stretching, wall squats, alternating lunges, leg press, straight leg raises, hip adduction lifts, and forward step-ups on a 4" step. Following treatment, ice was applied to the knee for 15 minutes with the leg elevated. Exercises were not performed in any particular order throughout the course of treatment due to the availability of equipment when other patients were in the clinic (Table 1).

### Outcomes

Comparisons of measures obtained prior to intervention and after intervention were used to determine whether changes occurred in the patient's knee function through the course of treatment.

### Pre-treatment measures

Pain was elicited when testing quadriceps strength in 75° and 90° positions, no pain was noted in the 105° or 115° posi-



**Figures 1A - 1C. Medical taping according to McConnell protocol.**

tions. Palpation revealed tenderness primarily over the lateral parapatellar region posteriorly at the superior lateral patellar region primarily. Slight tenderness was also noted at the medial border of the parapatellar region posteriorly (Table 2).

### Post-treatment measures

The patient reported pain on the Visual Analog Pain scale during walking as 1-2/10, ascending stairs 3/10, descending stairs 7/10 with sharp pain laterally. He also reported he had trouble with stops and some slight discomfort with wall squats. The patellofemoral brace was stated as helping reduce apprehension and decreasing pain by 25%. McConnell taping was reported to decrease pain by 25%. At time of discharge, the patient stated he was at 75% of his previous level of function and desired to return to running and playing his recreational activities again. Lateral tracking was observed to be present and moderate, especially with knee extension (Table 3).

### DISCUSSION

Following a regimen of physical therapy with McConnell taping technique for lateral tracking and lateral bracing, the patient with a history of chronic left knee dislocation had a reduction of apprehension for patellar dislocation, and increase in quadriceps strength, and a reduction in pain.

At the time of discharge, the patient had met approximately 65% of the stated goals. The goals not met pertained to decreased pain with ascending or descending stairs, performance of stairs with no difficulty, and active control of lateral tracking. The patients still reported his pain on the Visual Analog Pain Scale was 3/10 with ascending stairs and 7/10 with descending stairs. Difficulty with stairs was secondary to the pain in the lateral knee. Lateral tracking was reduced to a moderate level without the brace. Overall, the patient reported that he felt a 75% improvement when performing activities except stairs.

Both McConnell taping and patellar

**Table 1. Clinical Exercise Activities**

Activity	Date		
	6/17	6/19	6/24
Stationary Bike	5 minutes	10 minutes	10 minutes
Quad Sets	5 seconds - 20 reps	5 seconds - 20 reps	5 seconds - 20 reps
Short-arc quads over small 6" roll	30 reps	30 reps	30 reps
Knee flexion and extension in 90/90 supine position	30 reps	30 reps	30 reps
Hamstring stretch	45 seconds - 3 reps (90/90 position)	45 seconds - 3 reps (90/90 position)	45 seconds - 3 reps (90/90 position)
Wall squat	30 reps		30 reps
Alternating lunges	30 reps total		30 reps total
Leg press	Left leg 4 lbs - 30 reps	Left leg 4 lbs - 30 reps	Left leg 4.5 lbs - 30 reps
Straight Leg Raises	30 reps	30 reps	30 reps
Hip adduction lifts		30 reps	30 reps
Active forward 4" step			Only completed 8 - Still painful
McConnell Taping procedure of patella medially	performed		
Issued DonJoy Lateral-J patellar brace (knee sleeve)			Issued
Ice	15 minutes	15 minutes	15 minutes

**Table 2. Pretreatment Measures**

Range of Motion	Right	Left
Knee flexion supine	140°	130°
Active knee extension supine	10°	5°
Passive knee extension	10° hyperextension	10° hyperextension
Manual Muscle Testing (on a 5 point scale)	Right	Left
Quad sets	4+/5	3+/5
Straight Leg Raises	Normal	Normal
Quadriceps Strength	5/5	4/5 with pain
Hamstring Strength	5/5	5/5

bracing were separately implemented in the treatment of this patient. The purpose for using both was for comparison of the effectiveness of each intervention in the reduction of pain. In this case, the therapist was looking to find the most effective means of treating the knee pain that was conducive with the patient's lifestyle and also provided him with the greatest amount of mental ease.

When asked about the effectiveness of the McConnell taping, the patient reported a 25% decrease in pain. However, the patient reported that the tape irritated his skin. In order to prevent further problems for the patient, the taping process was discontinued. A DonJoy Lateral-J knee sleeve was issued on the last day treatment prior to discharge. The patient reported a pain reduction level of 25% with this intervention, as well as a decrease in apprehension of patellar dislocation.

McConnell taping is not suitable for all patients. A thorough biomechanical and musculoskeletal evaluation was performed that included both static and dynamic patellar positioning. Since the patient had an abnormal patellar position, genu recurvatum, an increased Q-angle, and recurrent problems with patellar subluxation, the therapist determined he would be a good candidate for patellar taping. The goal of McConnell taping was to apply strips of tape in a manner that holds the patella in the correct position for normal tracking during exercise and daily activities. If effective, the tape will relieve or significantly reduce the patient's pain so that he can perform his exercises until sufficient dynamic control is achieved. Dynamic control is usually achieved by retraining the VMO. As the patellofemoral symptoms subside and a balance between the medial and lateral dynamic and static stabilizers is achieved, the patient is gradually weaned from the taping procedure. The patient applies the tape every day for one week before exercising. The following week, the patient continues their home exercise program daily, but the tape is only applied every

other day before exercising. During the final week, the patient only applies the tape every third day prior to exercising.

It was hypothesized that patellofemoral taping would be as effective as a dynamic patellar brace in relieving the pain and apprehension associated with lateral displacement of the patella. The results of this chart review indicate that both interventions were equally effective in reducing this patient's patellofemoral pain. However, the patellar brace was more effective in also reducing this patient's apprehension associated with a lateral patellar displacement.

Taping techniques that follow the McConnell technique have become a standard form of treatment by physical therapists with knowledge of patellofemoral pain as interest in taping has increased.<sup>5,9</sup> In the current health care environment, multiple therapeutic interventions that require less direct supervision but that convey improved outcomes are needed. Taping intervention may be more practical for those patients who do not desire to wear a brace for an extended period of time but who are willing to follow the McConnell program for the 3 weeks while performing functional activities. Information from this case regarding the initial reduction of pain suggests that McConnell taping may be potentially beneficial in reducing long-term pain associated with lateral patellar tracking problems when used in conjunction with physical therapy strengthening exercises.

One limitation noted with this case is that the patient was only able to tolerate the taping through the length of one exercise session at the clinic. He was unable to wear it for the 3-week time period at home according to McConnell protocol. Further research that implements the McConnell taping technique with the recommended protocol of application is suggested.

#### REFERENCES

1. Larson B, Andreasen E. Patellar taping: a radiographic examination of the medial

**Table 3. Post-treatment Measures**

Range of Motion	Right	Left
Knee flexion supine	140°	135°
Active knee extension supine	10°	10°
Passive knee extension	10° hyperextension	10° hyperextension
Manual Muscle Testing (on a 5 point scale)	Right	Left
Quad sets	4+/5	4/5
Straight Leg Raises	Normal	Normal
Quadriceps Strength	5/5	4/5
Hamstring Strength	5/5	5/5

glide technique. *Am J Sports Med.* 1995;23(4):465-471.

2. Somes S, Worrell TW, Corey B, Ingersol CD. Effects of patellar taping on patellar position in the open and closed kinetic chain: a preliminary study. *J Sports Rehabil.* 1997;6:299-308.
3. Kowall MG, Kolk G. Patellar taping in the treatment of patellofemoral pain. *Am J Sports Med.* 1996;24(1):61-66.
4. Harrison EL, Sheppard MS, McQuarrie AM. A randomized controlled trial of physical therapy treatment programs in patellofemoral pain syndrome. *Physiotherapy Canada.* 1999:93-100.
5. Fulkerson JP. Diagnosis and treatment of patients with patellofemoral pain. *Am J Sports Med.* 2002;30(3):447-454.
6. Powers CM, Landel R, Sosnick T, et al. The effects of patellar taping on stride characteristics and joint motion in subjects with patellofemoral pain. *J Orthop Sports Phys Ther.* 1997;26(6):286-291.
7. Arnold BL. Bracing, taping, and patellofemoral alignment. *Professional J Athletic Trainers Ther.* 1998. 51-52.
8. Parsons D, Gilleard W. The effect of patellar taping on quadriceps activity onset in the absence of pain. *J Appl Biomech.* 1999;15:373-380.
9. Perle SM. Effect of patellar taping on knee kinetics of patients with patellofemoral pain syndrome. *J Sports Chiropractic Rehabil.* 2000;14(1):39-40.

#### President's Message (Continued from page 6)

be persistent in accomplishing its newly established goals. With the talented corp of volunteers that the Orthopaedic Section has, I believe we also are on the verge of making many more great new discoveries that will sublimely change the practice of

Orthopaedic Physical Therapy forever.

Orthopaedically yours,  
Michael T. Cibulka, PT,  
MHS, OCS  
President, Orthopaedic  
Section, APTA Inc.



# Case Report: Rehabilitation Outcomes in a Patient Following Implant of a UniSpacer® for Chronic Knee Pain

Rachel Dowler, Tena McGrew, Steven G. Lesh

## INTRODUCTION

Osteoarthritis is characterized by 2 localized, pathological features: (1) destruction of articular cartilage, and (2) the formation of bone in the margins of the joint.<sup>1</sup> The disease is often graded on radiographs according to the criteria of Kellgren and Lawrence on a 5-point scale<sup>1</sup>:

1. Grade 0, normal radiograph;
2. Grade 1, doubtful narrowing of the joint space and possible osteophytes;
3. Grade 2, definite osteophyte and absent or questionable narrowing of the joint space;
4. Grade 3, moderate osteophytes and joint space narrowing, some sclerosis, and possible deformity;
5. Grade 4, large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity.

Most studies have used grade 2 as the criterion for defining the disease. Although radiographic evidence of joint space narrowing and osteophytes may help confirm the diagnosis and classify the stage of the disease, the clinical criteria for knee osteoarthritis is described in terms of pain and limitation of movement.<sup>1,2</sup>

The UniSpacer® Knee Plant System implant is a minimally invasive treatment for the early stages of unicompartmental osteoarthritis of the knee. It is an innovative device designed to restore the stability and alignment of the knee and relieve pain, delaying and perhaps avoiding the knee from a total knee arthroplasty. It is believed to be a complimentary treatment alternative to other more traditional treatment options for patients with osteoarthritis.<sup>2</sup> The UniSpacer® is a small kidney-shaped insert, made of cobalt chrome. It provides a smooth surface for the bones to glide over when cartilage has been destroyed. The UniSpacer® functions as a self-centered bearing that requires no mechanical fixation to the knee anatomy. It comes in a wide variety of sizes to conform as closely as possible to the weight and size of each patient.<sup>3</sup>

The UniSpacer® received clearance in the United States for marketing in January 2001 by the FDA. The UniSpacer® is a trademark of Centerpulse Orthopedics Inc. There are a limited number of surgeons trained on the UniSpacer® procedure.<sup>3</sup> Surgeons must receive training and certification through Centerpulse Orthopedics' Bioskills Learning Lab prior to performing UniSpacer® surgeries.<sup>4</sup>

The UniSpacer® is indicated for the treatment of isolated, moderate degeneration of the medial compartment with no more than minimal degeneration in the lateral condyle or patellofemoral compartment. These patients typically present with a varus deformity. The UniSpacer® is not appropriate for patients with significant patellofemoral disease or significant lateral compartment disease, or those with subchondral bone loss. The anterior and posterior cruciate ligaments must be intact.<sup>5</sup>

The procedure takes approximately one hour to perform. Arthroscopic debridement and resection of the meniscus is followed by osteophyte removal and an open implantation of the device. Implant size is determined by a simple intraoperative anterior-posterior measurement. Thickness is determined by the joint space within the medial compartment.<sup>6</sup> The implantation procedure only requires a 3-inch incision versus an 8-inch incision for most total knee prosthetic implants. The procedure requires minimal surgical intervention and is performed under general anesthesia. Most patients are capable of returning to normal activities within a few months.<sup>6</sup>

There are general risks associated with every surgical procedure such as infection, cardiovascular complications, pulmonary complications, urinary complications, blood clots, and complications associated with use of drugs and anesthetic.<sup>3</sup> Potential risks associated with knee surgery, as well as the UniSpacer®, include pain, scarring from the incision, dislocation, need for revision, numbness around surgical site (which resolves over time), weakness, and atrophy.<sup>7</sup>

## CASE DESCRIPTION

### Patient

The patient is a 45-year-old male who reported a history of chronic pain in his left knee. He reported that his pain was aggravated by bending and eased with ice and rest. There was a known history of joint degeneration/osteoarthritis in the left and right knees shown through radiographic examination. The patient has a past medical history of high blood pressure, seasonal asthma, pneumonia, acid reflux, and angina. The patient did not report having any illness or weight change in the past month.

After the surgical implantation and prior to being seen in outpatient physical therapy, the patient was seen in the acute

care rehabilitation setting. During this time he was instructed on knee range of motion exercises, including extension and flexion, to be performing in his hospital room and at home. These exercises were to be performed daily until he could be seen in the outpatient therapy setting.

## Examination

Active range of motion of both knees was observed. The patient had full pain-free motion of the right knee. Left knee flexion presented at 56° and extension was at -8° limited due to pain.

Strength was observed on left lower extremity producing a palpable trace quadriceps and hamstring contraction. Actual girth measurements were not taken. Observable atrophy was present in both quadriceps and calf muscles.

Minimal ecchymosis was observed surrounding the incision line on the lateral left knee. Sutures were intact along a 3-inch incision line with no drainage noted. Tenderness was noted in the popliteal fossa upon palpation.

An antalgic gait pattern was present in which a short stance phase was demonstrated on the left lower extremity despite using bilateral axillary crutches. Minimal push off/heel off was present in gait sequence. Patient expressed fear of weight bearing on involved limb.

## EVALUATION

The symptoms of the patient are of moderate severity and are exacerbated with range of motion and weight bearing. Patient was started on a moderate physical therapy regimen to restore lost function.

Initial visits consisted of the following program: patient performed a warm-up activity most often consisting of stationary bike half circles for 10 minutes with no resistance. The patient was instructed in stretching techniques of the gastrocnemius, hamstring, hip flexors and extensors performing 10 repetitions of each holding for 10 seconds. Active assisted range of motion was performed using a scooter board while sitting to increase flexion. Leg press with involved limb only for 15 repetitions using 3 pounds. Straight leg raises as well as closed chain quad sets were performed 15 repetitions each with full extension lacking. Lunges anteriorly and laterally with crutches for support for 15 repetitions each reaching a distance of 40 to 50 centimeters. Toe raises of 15 repetitions and simple weight shifting on a

mini-trampoline forwards-backwards and side-side for 1 minute each working on proprioception and stability of the knee. As the patient progressed, a more strenuous exercise program was developed consisting of: warm-up activity on the stationary bike increased to 12 minutes and minimal resistance was added. Range of motion and strengthening exercises were increased to include plyowalk (lunging while holding a medicine ball with upper extremities) 90 feet; step-downs with 4 inch step 50 times stepping down with involved extremity and 40 times with uninvolved extremity (this exercise soon progressed to a 6 inch step); quarter squats with Swiss ball against the wall 2 sets of 10 repetitions while holding 10-pound weights; lunges were performed anterior, lateral, posterior-lateral, and anterior-lateral 7 times each independently; toe walk with 10 pound medicine ball 90 feet 2 times, plyocodmon's (feet planted using Thera-Band to simulate skiing motion) with blue Thera-Band 3 times 30 seconds each; resisted gait forward-backward 10 repetitions each; stairs ascending and descending 40 stairs independently. Previous exercises were still included with an increase in reps and weight.

By the second visit the patient was using only one crutch and had increased knee flexion to 81° and knee extension to -4°. At the fifth visit patient informed therapist he was now using a cane for safety purposes. After more intense exercise was added, the patient complained of sharp, aching pain in his knee. By visit 7, complaints of pain had ceased, patient was performing stairs independently. The patient was seen for a total of 9 visits.

Goals set for this patient during this episode of care were as follows:

#### Short-term Goals:

1. Increase range of motion to 75% within normal limits.
2. Gait sequence with minimal deviation with no assistive device.
3. Increase strength to 3+ or 4/5.

#### Long-term Goals:

1. Independent with home exercise program emphasizing functional return.
2. Range of motion within normal limits.
3. Functional testing (including double limb squat, single limb squat with involved extremity, anterior and lateral lunges) with both LE 95% of uninvolved extremity.

#### OUTCOMES

After one month of treatment (9 visits) the patient's active range of motion had been increased in flexion from 56° to 119° and extension increased from -8° to -1°. Gait sequencing improved from ambulating with bilateral axillary crutches

to ambulating independently with occasional use of a straight cane with no major gait deviations. Manual muscle testing showed muscle grade of 4+/5 for extension and 5/5 for flexion, however, the level of strength and endurance in his left knee did not match that of his right knee. The goals set for this episode of care were partially met. Goals not met and disabilities still present included STG # 2 as the patient was still using a cane periodically, and LTG # 3 as the patient performed functional tests as described at 75% capacity of the uninvolved extremity. Patient was able to perform all ADLs with no complaints of pain or discomfort. The patient was discharged from therapy having previously received a home exercise program to maintain functional level. Patient compliance was the chief reason for discontinuation of services as the patient did not attend therapy for 2 consecutive scheduled visits. When contacted via telephone, the patient reported he was pleased with his progression and overall level of activity, and that he would continue to do home exercise program. The patient was instructed that if any problems developed that he was to contact the clinic.

#### DISCUSSION

With the increasing use of the UniSpacer® it is important to understand the differences between this procedure and a total knee arthroplasty (see Table 1). A total knee arthroplasty is a surgical procedure where the diseased knee joint is replaced with prosthetic implants sacrificing significant bone stock. During a total knee arthroplasty the end of the femur bone is removed and replaced with a metal shell. The end of the tibia is also removed and replaced with a channeled polyethylene platform. Depending on the condition of the patella, a plastic 'button' also may be added under the kneecap surface. In a total knee arthroplasty the posterior cruciate ligament is either retained, sacrificed, or substituted by a polyethylene post.<sup>10</sup>

In the UniSpacer® procedure, arthroscopic debridement and resection of the meniscus is followed by osteophyte removal and an open implantation of the device. Only minor disturbance to the bone occurs.<sup>2,9</sup> The surgery also restores ligament tension and knee alignment.<sup>9,11</sup> Implant size is determined by a simple intraoperative anterior-posterior measurement. Thickness is determined by the joint space within the medial compartment. A total knee arthroplasty requires between 1 and 3 hours to perform. The patient is usually required to stay 3 to 4 days in the hospital following a total knee arthroplasty; whereas the UniSpacer® procedure typically only requires an overnight stay.<sup>10,12</sup>

In both procedures, physical therapy is an important part of rehabilitation and requires full participation by the patient for optimal outcome. In patients with a total knee arthroplasty, physical therapy often begins 1 to 2 days postoperatively. Some degree of pain, discomfort, and stiffness can be expected in the early days of therapy. Knee immobilizers are often used in order to stabilize the knee while performing physical therapy, walking, and sleeping.<sup>13</sup> In patients who receive the UniSpacer® procedure, physical therapy should likewise begin early post op. Full weight bearing as tolerated is allowed first week postoperative a UniSpacer, procedure as well as strengthening and ROM exercises.<sup>14</sup>

Surgeons are more reluctant to perform a total knee arthroplasty on younger, more active individuals because of the irreversible removal of bone to fit the prosthetic implants. No alteration of the surrounding bone or soft tissues is required for the UniSpacer®. This is contributing to the increased use of the UniSpacer® procedure on younger, active populations.<sup>15</sup> Total knee implants wear and cause more of a problem in younger patients who typically put more demand on the implanted joint. The UniSpacer® can be used to delay the need for a total knee arthroplasty in these more active individuals. Researchers anticipate that the UniSpacer® will last close to 10 years.<sup>15,16</sup>

The UniSpacer® procedure permits patients to return to full, normal activity in 4 months rather than a total knee arthroplasty that can take up to 12 months. With the UniSpacer® the patient is allowed to put full weight on the extremity immediately, unlike with a total knee arthroplasty.<sup>14</sup>

Early published reports by Hallock and Fell<sup>9</sup> for 67 patients receiving the UniSpacer® described improvement on the Knee Society clinical rating system of 169% for 1-year follow up and 193% improvement for 2-year follow up and the Lysholm score also demonstrated improvement of 88% and 140% respectively. During the investigation 5 implants (7%) were revised to total knee arthroplasty and 10 implants (14%) were revised to another UniSpacer® implant. Despite some early supportive evidence, Scott<sup>8</sup> believes that the widespread utilization of the UniSpacer® is unlikely because only 1% of all OA patients present as appropriate unicompartmental candidates.

#### CONCLUSION

With a potential increase in the usage of the UniSpacer® as a complimentary alternative treatment option for patients with unicompartmental osteoarthritis, clinicians must understand the surgical

**Table 1. Comparison of UniSpacer® and Total Knee Arthroplasty Procedures<sup>2,8-15</sup>**

	<b>UniSpacer®</b>	<b>Total Knee Arthroplasty</b>
<b>Goals of Intervention</b>	-Improve knee function -Maintain ROM -Provide pain relief	-Improve knee function -Maintain ROM -Provide pain relief -Correct structural deformity
<b>Duration of Surgery</b>	1 hour	2 - 4 hours
<b>Estimated Length of Stay in Hospital</b>	1 day	3 - 4 days
<b>Estimated Time to Return to Full Activity Level</b>	4 months	12 months
<b>Surgical Complexity</b>	Conservative, yet technically demanding and sensitive	Radical
<b>Bone Stock</b>	-Minimal removal of osteophytes. -Minor bone disturbance.	Major osteotomy and removal of bone stock
<b>Fixation</b>	Mobile, non-fixed	Various cemented and non-cemented prosthetic appliances
<b>Knee Compartment Involvement</b>	Isolated unicompartmental OA (medial only)	Bilateral OA
<b>Knee Ligament Integrity</b>	-Structural ligaments are spared. -Theorized to eliminate pseudolaxity of the MCL. -Potential rehabilitation implications for kinesthetic awareness.	-Structural ligaments are typically sacrificed, but some prosthetic implants will spare PCL. -Potential rehabilitation implications for kinesthetic awareness
<b>Deformity Correction</b>	Can provide axial correction for a varus deformity	Typically provides axial correction of varus deformity
<b>Revision Ability</b>	Easily revised	Greater complexity involved
<b>Postoperative Weight Bearing</b>	Full weight bearing	Various degrees of weight bearing status ranging from full to nonweight bearing depending on surgical intervention
<b>Published Reports of Effectiveness</b>	Minimal literature supporting widespread utilization	Extensive literature supporting widespread utilization
<b>Ideal Patient for Utilization</b>	-Unicompartmental OA -Younger in age -Greater activity demands -May also be utilized for patients that are too heavy for traditional TKA or when osteotomy is contraindicated	Indicated for most patients with OA involving both compartments of the knee and where conservative interventions are no longer successful.

procedure and appreciate the expected outcome from treatment. Physical therapists and other health care providers can learn from this case by being able to help identify which rehabilitative interventions would be most beneficial for a particular patient in order to promote an effective restoration of lost function.

**REFERENCES**

1. O’Sullivan S, Schmitz T. *Physical Rehabilitation Assessment and Treatment*. 4th ed. Philadelphia, Pa: FA. Davis Company; 2001.
2. Hallock RH. The UniSpacer knee system: have we been there before? *Orthopedics*. 2003;26(9):953-954.
3. Glendale Memorial. Unispacer-Frequently asked questions. Available at: [http://www.glendalememorial.com/ortho/uni\\_faq.html](http://www.glendalememorial.com/ortho/uni_faq.html). Accessed August 18, 2003. Medical Policy 3.07.16.
4. Unicodylar interpositional spacer as a treatment of unicompartmental arthritis of the knee. March 3, 2003. Available at: <http://medpolicy.bluecrossca.com/policies/surgery/unispacer.html>. Accessed July 20, 2003.
5. University of Missouri Health Care. New minimally invasive procedure

- alternative to joint replacement of the knee. July 3, 2002. Available at: <http://www.muhealth.org/news/www/UNISPACER02.shtml>. Accessed March 10, 2004.
6. Centerpulse. A less demanding alternative to total knee arthroplasty. Available at: [http://www.centerpulseorthopedics.com/us/physicians/caremis/knee\\_unispacer/index](http://www.centerpulseorthopedics.com/us/physicians/caremis/knee_unispacer/index). Accessed March 10, 2004.
7. Aitchison T. New minimally invasive surgical procedure for arthritis may delay knee replacement surgery. April 4, 2002. Available at: [http://www.eurekalert.org/pub\\_releases/2002-04/hak-nmi032602.php](http://www.eurekalert.org/pub_releases/2002-04/hak-nmi032602.php). Accessed August 18, 2003.
8. Scott RD. UniSpacer: insufficient data to support its widespread use. *Clin Orthop*. 2003;Nov(416):164-166.
9. Hallock RH, Fell BM. Unicompartmental tibial hemiarthroplasty: early results of the UniSpacer knee. *Clin Orthop*. 2003;Nov(416):154-163.
10. Withers B. UniSpacer can replace damaged cartilage. *The Herald Dispatch*. July 2, 2003. Available at: <http://www.herald-dispatch.com/2003/July/02/LFlist1.html>. Accessed March 10, 2004.

11. Levine M. New device alleviates knee pain. *Gazette*. November 26, 2002. Available at: <http://gazette.net/200248/potomac/news/1326791.html>. Accessed July 20, 2003.
12. Friedman M. New hope for knee arthritis sufferers! Available at: <http://www.scoi.com/unispacer.html>. Accessed July 23, 2003.
13. Medicine Net. Total Knee Replacement. February 2, 2003. Available at: [http://www.medicinenet.com/Total\\_Knee\\_Replacement/page2.html](http://www.medicinenet.com/Total_Knee_Replacement/page2.html). Accessed July 20, 2003.
14. You J. UniSpacer may delay TKR for patients with early osteoarthritis. July 31, 2003. Available at: <http://www.knee1.com/News/MainStory.cfm/210>. Accessed August 18, 2003.
15. Orthopedic Associates of DuPage. Unispacer: New minimally invasive knee surgery. Available at: <http://www.orthodupage.com/unispacer.html>. Accessed July 21, 2003.
16. The Kansas City Channel. Device may help prolong total knee replacement. Available at: <http://www.thekansascitychannel.com/health/2064245/detail.html>. Accessed July 20, 2003.



# Exercises for Patients with Chronic Low Back Pain

J. Adrienne McAuley, PT, OCS

## A FOCUSED REVIEW OF LITERATURE

### INTRODUCTION

There is limited research examining exercise and its effect on chronic pain. There are many papers that have specifically taken into account chronic low back pain. These studies have answered the first question, is exercise better than no exercise in the management and treatment of chronic low back pain?<sup>1-5</sup> The overwhelming answer is yes. This leaves the critical follow-up question unanswered; what parameters of exercise are most beneficial?

Many types of exercise are used in clinical practice including aerobic, flexibility, core stabilization, and global strengthening. Two well-done review articles<sup>6,7</sup> concluded that trunk extensor and abdominal strengthening, and whole body intensive exercise were beneficial for people with chronic low back pain. Maher goes on to suggest that a “head-to-head” comparison of whole body exercise with the stabilization program advocated by Richardson and colleagues<sup>8</sup> would be an ideal study to offer evidence-based clinical guidance. This study has not yet been done.

Three studies have, however, been completed examining the effect of the Richardson et al program for patients with chronic low back pain.<sup>9-11</sup> The purpose of this paper is to evaluate and compare the findings from these studies as well as to draw conclusions regarding clinical practice and further research.

The scientific and clinical basis of Richardson’s program has potential to assist in exercise prescription for other musculoskeletal chronic pain conditions. Hides and Richardson suggest that stabilizing muscles are more susceptible to reflex inhibition and increased fatigability and that, as demonstrated in the lumbar multifidi, do not recover neuromotor control without specific training. They also confirmed the delayed onset, or absence, of the transversus abdominis muscle in subjects with chronic low back pain as compared to the ‘feedforward’ activation of the same muscle in normal subjects preparing to move an extremity.<sup>8,12,13</sup>

Characteristics of stabilizing muscles are listed in the Table 1. Examples of such muscles would be the vastus medialis in the knee, the rotator cuff in the shoulder, gluteus medius in the hip, and the soleus affecting the ankle. A summary of the training, as it might be applied to any one

of these muscles, and its synergists, is listed in Table 2.

**Table 1. Characteristics of Stabilizing Muscles**

- Cross only one joint
- Deep, close to joint
- Attachments to non-contractile structures
- Often pennate
- Tonic, anti-gravity muscles
- Short length
- Designed to increase joint stiffness

**Table 2. Summary of the Specific Stabilization Training**

- Perform voluntary isometric exercise of specified muscle
- Low load exercise
- Neutral joint position
- Kinesthetic awareness
- Facilitation of inhibited muscle
- Painless exercise
- Commence early in rehabilitation
- Perform frequently and regularly to target Type 1 Fibers
- Progress holding time of isometric contraction

### METHODS

Inclusion criteria for this review were use of the specified exercise protocol in a randomized control trial with valid outcome measures employed. The studies were located via Medline and CINAHL databases 1995-2003, as well as reviewing the references of related papers. There were no papers found examining the stabilization protocol for diagnoses other than low back pain. Data extraction and quality assessment were completed as recommended by van Tulder and associates.<sup>14</sup> Appendices 1 and 2 show comparisons of the studies. Three studies met the stated criteria for review.<sup>9-11</sup>

### RESULTS

The first study that undertook a randomized controlled trial of the specific exercise training was O’Sullivan et al.<sup>9</sup> Unique to this study was the inclusion criterion that subjects have radiologic evidence of spondylolysis or spondylolisthesis. Furthermore, although the average duration of pain was 28 months, the range was 1 month to 4 years. This study was the only one that clearly included subjects with leg symptoms.

The Moseley<sup>10</sup> study had a significant withdrawal rate. Reasons for this are not clear, but included ‘drop-outs’ and ‘lost to follow up.’ There are no signifi-

cant differences noted between those who completed the study and those who withdrew.

All studies had control groups comparable to the intervention groups. The baseline measures used differ between the studies, but as seen in Appendix 1, they are similar for age and none had neurological deficits. The use of control groups varied between the studies. O’Sullivan et al employed a comparison group, but did not regulate their care; the primary physician remained the clinical decision maker. Danneels and colleagues<sup>11</sup> used the stabilization training across all groups and tested other exercise as the independent variable. Moseley used the stabilization training across all groups and tested education as the independent variable as well.

The third study conducted by Danneels et al was similar to the study by Moseley whereby both research designs altered the training program slightly. This is outlined in Appendix 3. Of interest is the difference in frequency and duration of intervention. O’Sullivan and colleagues and Danneels et al established a duration of 10 weeks with once per week and 3 times per week respectively. The O’Sullivan and colleagues intervention, however, measured compliance with a home program via diary. Moseley also had subjects maintain a diary, but in this study the intervention was twice per week for only 4 weeks.

According to the *Guide for Physical Therapist Practice*, goals and outcome measures can be considered for pathology, impairments, function, and disability. O’Sullivan et al and Moseley used self-reported pain and functional questionnaires. O’Sullivan also considers hip and trunk range of motion at the impairment level. Danneels et al were specifically interested in the cross-sectional area of the multifidi muscles.

All 3 papers report significant benefit related to the stabilization protocol. The Danneels study is the only 1 of 3 studies reviewed that did not conduct long-term followup.

### DISCUSSION

These 3 studies demonstrate high quality research. There are differences between the studies, namely the radiographic findings and the outcome measures. It is therefore difficult to make comparisons between studies. There is, however, strong evidence that the stabi-

lization program outlined by Richardson et al is an appropriate intervention for patients with chronic low back pain.

There is one confounding finding that deserves note; the Danneels et al study examining the multifidi did not find that stabilization alone was able to increase cross-sectional area. Also there was no correlation between the cross-sectional area of the multifidi with reported function, or with objective measures of performance. Furthermore, the addition of trunk and lower extremity movement with isometric holds described by Danneels and associates are not clearly different than the more advanced levels of the Richardson et al protocol used by O'Sullivan et al.

## CONCLUSION

Based on the findings of these studies it seems that low back pain associated with radiologic pathology can benefit greatly from the stabilization training exclusively. When presented with a patient having nonspecific chronic low back pain a more comprehensive approach to exercise prescription would appear to have greater advantage.

Further research is clearly indicated to address the following questions:

- (1) What is the relationship between multifidi cross-sectional area and outcomes as measured by self-report questionnaires?
- (2) How does the stabilization training compare to a more generalized exercise program? Are the two together more advantageous than either alone?
- (3) What are the outcomes of the stabilization training for other regions such as neck, shoulder, or hip?

## CLINICAL EXAMPLE

JG is a 52-year-old woman who was referred for physical therapy evaluation and treatment. Her chief complaint was of right hip and thigh pain. The quality was described as diffuse and burning. Symptoms had been present for approximately 6 months and began within 1 to 2 days following a long walk.

At the time of initial evaluation, symptoms were intermittent and provoked within 5 minutes of walking. She had no pain at rest. Past medical history was unremarkable. She had been diagnosed with trochanteric bursitis and prescribed an anti-inflammatory medication which she had been taking for 2 weeks.

## EVALUATION

**Posture:** Pelvis slightly rotated right with left hip in relative IR.

**Gait:** Slight circumduction of left

lower extremity through swing phase.

**Trunk ROM in Standing:** Full flexion, extension, sidebending, and rotation with pelvis stabilized.

**Myotomes, Dermatomes, DTRs:** Intact.

### Functional Tests:

Slight Trendelenberg on the right lower extremity with single limb stance. Difficulty with return to stand from squat.

**Hip ROM:** Left hip full and pain free. Right hip limited to 95° flexion in supine with firm endfeel. Right hip ER in sitting limited to 30° compared to 45° on the left.

**Hip MMT:** MMT performed according to Kendall. Left hip 5/5 and pain free. Right hip 3-/5 gluteus medius and gluteus maximus.

**Palpation:** Positive tenderness, increased tone, and myofascial trigger points in the right psoas, quadratus lumborum, and iliotibial band.

**Muscle Flexibility:** Moderate tightness of right LE for Thomas test and Ober test.

**Movement Assessment:** Poor dissociation of hip (seated hip flexion, prone hip extension) from pelvis. By palpation, poor recruitment of transversus abdominis in quadruped and prone. By palpation, no recruitment of multifidi in quadruped and prone.

## ASSESSMENT

JG presents to physical therapy with right hip and thigh pain associated with weakness and movement dysfunction. She has poor ability to move the hip independent of the pelvis and this has resulted in pain and gait abnormalities.

### Treatment 1 (Day 1)

Mobilization of right hip to increase flexion (posterior glide in supine). Education and training for transversus abdominis in quadruped with good performance (Figure 1) and initiate dissociation of femur from pelvis with self-assisted ROM (Figure 2).



Figure 1.



Figure 2.

### Treatment 2 (Day 4)

Manual therapy included myofascial release to psoas and quadratus as well as AAROM/PNF to facilitate gluteus medius and maximus isolated contractions. Progress core stabilization to include prone transversus abdominis with multifidi along with prone knee bend (Figure 3) and prone hip extension (Figure 4). Progress hip dissociation to hooklying march as well as heelslide to help lengthen hip flexors.



Figure 3.



Figure 4.

### Treatment 3 (Day 11)

JG reports that she can now walk 15 minutes before symptoms occur. Progress core stabilization to include single limb stance for up to 30 seconds without contralateral pelvic drop. Patient instructed to use mirror for feedback. Also progress hip dissociation to include sidelying external rotation (Figure 5).



Figure 5.

### Treatment 4 (Day 16)

JG reports walking 15 minutes 2x per day without symptoms. Right hip flexion now at 110°. Gluteus medius and maximus at 3+/5. Thomas test WNL. Ober test still moderately limited. Emphasis on functional training and incorporation of core stabilizers into basic ADLs including sit ← → stand and negotiating stairs.

Exercises progressed to include bridging with marching (Figure 6) and patient instructed to increase one of her walks by

5 minutes every other day until she is able to do 60 minutes 3 to 4 days per week. Discharge from physical therapy.

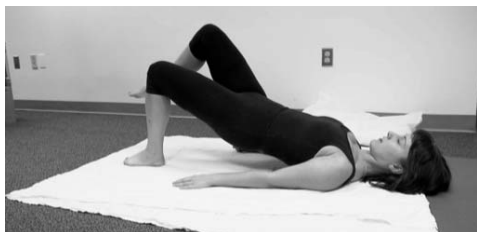


Figure 6.

## REFERENCES

1. Mannion AF. Active therapy for chronic low back pain: Part 1. Effects on back muscle activation, fatigability, and strength. *Spine*. 2001;26(8):897-908.
2. Hartigan C, Rainville J, Sobel JB, Hipona M. Long-term exercise adherence after intensive rehabilitation for chronic low back pain. *Med Sci Sports Exerc*. 2000;32(3):551-557.
3. Moseley L. Combined physiotherapy and education is efficacious for chronic low back pain. *Aust J Physiother*. 2002;48:297-302.
4. Bentsen H. The effect of dynamic strength back exercise and/or a home training program in a 57-year-old woman with chronic low back pain: Results of a prospective randomized study with a 3-year follow up period. *Spine*. 1997;22(13):1494-1500.
5. Frost H, Lamb SE, Shackleton CH. A functional restoration programme for chronic low back pain. A prospective

- outcome study. *Physiotherapy*. 2000;86(6):285-293.
6. Hubley-Kozey CL, McCulloch TA, McFarland DH. Chronic low back pain: A critical review of specific therapeutic exercise protocols on musculoskeletal and neuromuscular parameters. *J Manual Manipulative Ther*. 2003;11(2):78-87.
7. Maher C, Latimer J, Refshauge K. Prescription of activity for low back pain: What works? *Aust J Physiother*. 1999;45:121-132.
8. Richardson CA, Jull GA. Muscle control - pain control. What exercises would you prescribe? *Manual Ther*. 1995;1:2-10.
9. O'Sullivan PB, Phytty GD, Twomey LT, Allison GT. Evaluation of specific stabilizing exercise in the treatment of chronic low back pain with radiologic diagnosis of spondylolysis or spondylolisthesis. *Spine*. 1997;22(24):2959-2967.
10. Moseley GL. Joining forces - Combining cognition-targeted motor control training with group or individual pain physiology education: A successful treatment for chronic low back pain. *J Manual Manipulative Ther*. 2003;1(2):8-94.
11. Danneels LA, Vanderstraeten GG, Cambier DC, et al. Effects of three different training modalities on the cross sectional area of the lumbar multifidus muscle in patients with chronic low back pain. *Br J Sports Med*. 2001;5:86-191.
12. Richardson CA, Jull GA, Hodges P, Hides J. *Therapeutic Exercise for Spinal Stabilization in Low Back Pain*. New York, NY: Churchill Livingstone; 1999.
13. Hides J, Richardson C. Exercise and Pain. In: *Pain: A Textbook for Therapists*. Strong J, Unruh AM, Wright A, Baxter D, eds. New York, NY: Churchill Livingstone; 2002:245-266.
14. Van Tulder M, Furlan A, Bombardier C, Bouter L; Editorial Board of the Cochrane Collaboration Back Review Group. Updated method guidelines for systematic reviews in the Cochrane Collaboration Back Review Group. *Spine*. 2003;28(12):1290-1299.

## Appendix 1.

Criteria	O'Sullivan et al (1997)	Danneels et al (2001)	Moseley et al (2003)
1	+	+	+
2	+	U	U
3	+	+	+
4	+	+	-
5	+	-	+
6	+	+	+
7	+	+	+
8	-	-	-
9	U	+	U
10	-	+	-
11	+	+	+
<b>Total</b>	<b>8+</b>	<b>8+</b>	<b>6+</b>

**Key:** 1. Randomization  
 2. Blinded allocation  
 3. Study groups similar at baseline  
 4. Withdrawal rate <20%  
 5. Compliance measured, and is satisfactory  
 6. Co-interventions avoided or similar  
 7. Patient blinded /

credible treatment  
 8. Provider of intervention blinded to treatment  
 9. Outcome assessor blinded  
 10. All patients included in analysis  
 11. Timing of outcome measures similar for experimental and control groups

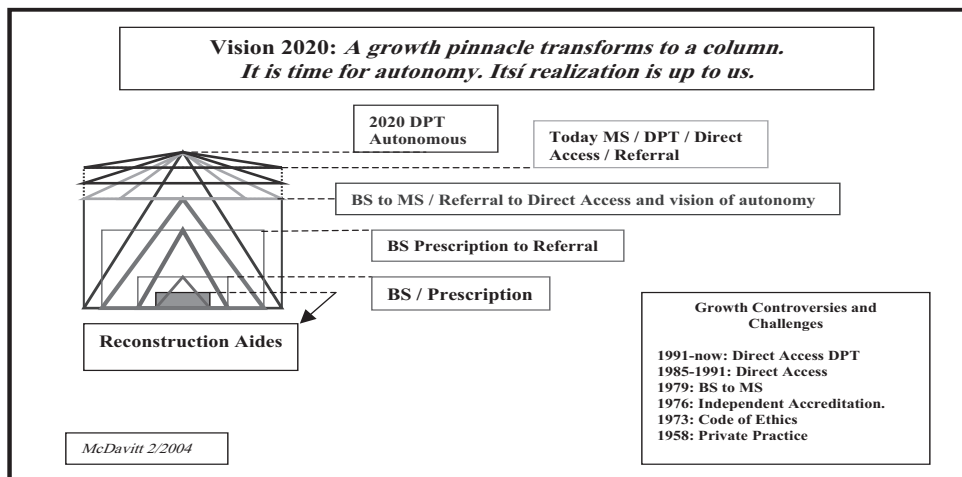
**Key:** + = Affirmative  
 - = Negative  
 U = Unclear

## Appendix 2.

<b>Author</b>	<b>O’Sullivan et al</b>	<b>Danneels et al</b>	<b>Moseley et al</b>
<b>Year / Journal</b>	1997/ <i>Spine</i>	2001/ <i>Br J Sports Med</i>	2003/ <i>J Manual Manipulative Ther</i>
<b>Purpose</b>	R & J protocol for subjects with radiologic defect	Effect of 3 training programs on CSA multifidi	Modified R & J protocol with group or individual education
<b>Subjects</b>	20-43 y.o.	31-56 y.o.	34 – 48 y.o.
<b>Duration Pain</b>	1 month – 4 yrs.	> 3 months	16 – 44 months
<b>X-ray findings</b>	Spondylolysis or spondylolisthesis	No radiologic defect	No radiologic defect
<b>Neurological status</b>	No neurologic deficits	No neurologic deficits	No neurologic deficits
<b>Leg pain included</b>	Yes	Unclear	Unclear
<b>Completed</b>	42 / 44	59 / 59	31 / 41
<b>Control Group</b>	“Comparison” group	3 different interventions	2 different interventions & “comparison” group
<b>Intervention Training</b>	R & J protocol	1) R & J “modified” protocol 2) 1 + trunk ext. 3) 2 + isometric	1) R & J “functional” protocol with group education 2) R&J “functional” protocol with individual education
<b>Intervention Period</b>	1x / wk x 10 weeks	3x / wk x 10 weeks	2x / wk x 4 weeks
<b>Home Program</b>	10-15 mins / day Diary maintained	Not specified	Not specified Diary maintained
<b>Outcome Measures</b>	Self reported measures including McGill, Oswestry & hip ROM	CSA of multifidi via CT scan	Self reported measures including RMDQ
<b>Results (end of intervention)</b>	R & J group statistically significant improvements  p < .05	Only group 3 showed statistically significant increase in CSA of multifidi  p < .05	Individual education group greater improvements, but both groups statistically improved  Average effect size 5.1
<b>Follow-up</b>	3, 6, 30 months Benefits maintained	None	50 weeks Benefits maintained

## Appendix 3.

<p><b>Richardson &amp; Jull Protocol as used in O’Sullivan, 1997</b></p> <p>In addition to protocol, the named study employed sEMG to ensure no substitution muscle recruitment when engaging transversus abdominis.</p> <ol style="list-style-type: none"> <li>1. Isometric co-contraction of transversus abdominis &amp; multifidi recruiting 30% - 40% MVC.</li> <li>2. Start in neutral spine: quadruped → prone → stand</li> <li>3. Use of pressure biofeedback (“stabilizer”) in prone for initial training</li> <li>4. Perform “as many times as possible through the day”</li> <li>5. Criteria for progression to next level – ability to sustain 10 second hold x 10 repetitions</li> <li>6. Progression: <ul style="list-style-type: none"> <li>Level 1: Hold time, repetition, position variation</li> <li>Level 2: Add external load / limbs → dynamic trunk movement → function, ADLs</li> </ul> </li> </ol>	<p><b>“Modified” Protocol as used by Danneels, 2001</b></p> <p>All groups performed stabilization, but without the use of the “stabilizer” and specific instructions were not outlined in writing.</p> <p>Group 2: Addition of quadruped with LE extension, prone trunk extension and prone hip extension (simultaneous right &amp; left). Concentric 2 seconds, eccentric 2 seconds.</p> <p>Group 3: As in group 2, but with a 5 second isometric hold between concentric &amp; eccentric.</p> <p><b>“Functional” Protocol as used by Moseley, 2003</b></p> <ol style="list-style-type: none"> <li>1. Initial training position “most comfortable” by patient choice.</li> <li>2. Use of positive imagery (performing without pain) before progressing to next level of exercise or functional task.</li> <li>3. Exposure and training during cognitive and psychosocial stresses.</li> <li>4. Physically demanding tasks.</li> </ol>
---	--



We are now in the most important phase of mobilizing the profession of physical therapy along the last pinnacle of transition to the top of the autonomous practitioner pillar. When we look back at our history from the beginning, physical therapists in response to the demands from society have traditionally strived to ‘lateralize’ or polish their current practice standards to enhance patient outcomes from practice. With on-going future vision combined with additional demands from society, physical therapists also have taken on vertical practice controversies and challenges in dimensions of practice to enhance both patient deliveries of services and outcomes from practice. One can visualize a model of physical therapy growth then to be at first a small rectangle of vertical and horizontal knowledge, skills, and attitudes as a baseline rectangle representing the days of reconstruction aides and a small triangle projecting in the middle, out of the top toward the next level of visualization of practice. The pinnacle piercing upward represents the next vision (baccalaureate education). With every pinnacle, the physical therapy practice fills ‘laterally’ or horizontally in knowledge and practice competency creating a new height, width, and depth to the pinnacle which then further transitions to a higher column and a new pinnacle of growth vision. With each new vision there is a pinnacle piercing higher and follows with horizontal strands in knowledge, skills, and attitudes reflected in education, research, legislation, regulation, and public acknowledgement with a responsive and reflective lateral and vertical growth in the practice pillar.

When we look back at our transitioning from reconstruction aides, we see such dimensional growth from solving practice

controversies and challenges and from which the greatest magnitude probably occurred in the past 2 to 3 decades.

- 1956-1958: Acceptance of Private Practice Section was controversial. PTs thought of themselves as ‘a service group’ dedicated to medicine as opposed to ‘making a profit.’
- 1967-1973: APTA Code of Ethics and Guide to Professional Conduct allowed support for PTs to practice by referral, not prescription.
- 1973-1976: PT independent accrediting agency for PT programs (COPA).
- 1976-1979: Post baccalaureate debate; “The professional degree should be a post baccalaureate level.”
- 1985-1991: Direct Access: challenged in legislation/regulation by issues of diagnosis competency and whether or not diagnoses could be made by those other than medical doctors.
- 2000: DPT and autonomous practice by 2020.

Presently and futuristically, when considering the 6 elements identified in the APTA Vision 2020 statement and their relationship within the pillar and pinnacle model, the element professing “*Physical therapists will be practitioners of choice in clients’ health networks and will hold all privileges of autonomous practice*” should have the highest priority. Achieving autonomous practice creates a distinguished practitioner of choice. Autonomous practice then becomes the highest priority. For many years our practice demands have expansively necessitated that physical therapists deliver the equivalent spectrum of clinical practice standards, ethical standards, and legal accountability as any other profession practicing autonomously,

without the professional privileges of public, regulatory, or reimbursement acknowledgements for autonomous practice. The academic standards, practice performance standards, evidence-based research, and the growing regulatory practice history of transitioning to direct access over the past 2 decades are exemplary in support of autonomous physical therapy practice. Being directly recognized for our expert professional skills and having the full spectrum of autonomous privileges, including but not limited to total direct access to patient care and reimbursement, now needs to be realized and accepted in the reimbursement, regulatory, legislative, and practice arenas.

As described historically, in meeting society’s needs the practice paradigm of physical therapy has traditionally yielded a pillar-like structure composed of vertical visionary influences followed by broadening horizontal practice dimensions. The priority of being the practitioner of choice with autonomous practice privileges is the ultimate goal and present pinnacle at the top of the practice pillar for physical therapy. To realize this priority, we must now look to achieve the final horizontal broadening of that pinnacle by achieving the Vision 2020 element that all “*consumers will have direct access to physical therapists in all environments for patient/client management, prevention, and wellness service.*” Substrategies directed at proving competency and outcomes effectiveness in attending to the relevant challenges of direct access within each arena of education, research, legislation, regulation, and reimbursement will directly move us to autonomy. This win-win strategy employed over the immediate future apports and supports the transitioning needs of our profession, respects and protects the present practice privileges of those uninterested or unsettled by the current DPT transition direction of our profession, and builds the core foundation for meeting the needs and demands of society in consideration of autonomous physical therapy practice.

Considering the vision we have adopted, striving for anything less than physical therapists being the practitioners of choice in clients’ health networks with all privileges of autonomous practice in the near future is unthinkable. The time is now and realization of this vision is up to us.



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

Haher T, Merola A. *Surgical Techniques for the Spine*. 2003, New York, NY: Thieme; 283 pp., illus.

This text is directed to the new spine surgeon first and then to the more experienced surgeon. Although not intended for the rehabilitation specialist, the book does have some limited benefit to the physical therapist. The editors have provided a comprehensive text for the spine with a total of 59 chapters. Fifteen chapters comprise the cervical spine section, with 24 and 18 chapters respectively in the thoracic and lumbar spine sections, all following the same format.

Many of the procedures described are the more common ones that have stood the test of time. However, there are new approaches with modifications that have proven very successful. Contributors were chosen based on their expertise on a given topic. Within each chapter the contributors were asked to describe advantages, disadvantages, indications, and contraindications they consider for their procedure. The minimum preop evaluation is included to adequately plan and perform each technique. The text is divided by anatomical region to aid the reader in locating a technique for a specific spinal problem. Outstanding illustrations and photographs are found throughout this text. This feature alone makes the text worth having. In reviewing this text one has to conclude that it is most valuable to spine surgeons. But several sections within most of the chapters allude to the physical therapist's role. These sections describe complications and postop care, including ambulation, transfers, positioning, and bracing. The orthopaedic physical therapist would benefit from a better, if basic, understanding of some of the more common spine surgeries. The goals, specific approaches, and indications for surgery are of particular benefit.

In conclusion, the editor's have provided a superb and comprehensive text for the orthopaedic surgeon. While there are more appropriate books for physical therapists working in spine rehabilitation, there is worthwhile information included.

Dan Bankson, MSPT, CFMT, CSCS

Beasley RW. *Beasley's Surgery of the Hand*. New York, NY: Thieme; 2003, 531 pp., illus.

Over 20 years ago, Robert W. Beasley, MD authored *Hand Injuries*, which was one of the first books to provide a comprehensive guide to the care of acute injuries of the hand. Emphasizing the importance of a thorough knowledge of functional and surgical anatomy, Dr. Beasley has recently authored an updated, expanded text on reconstructive surgery of the hand. The author suggests this text is written to provide medical students, residents, and hand surgeons with a basic understanding and sensible approach to hand injuries; however, therapists interested in a compilation of standard surgical procedures for the hand may find this book useful as it is written in a clear, direct style.

The book is divided into 30 chapters covering common injuries, medical disorders, and elective surgery. Each chapter is well supported with excellent photographs and anatomic drawings to illustrate points and give meaning to the text. However, the book is designed to provide a synopsis of surgical procedures for a wide variety of injuries and dysfunctions and as such, serves as a reference guide to surgical intervention rather than an in-depth resource on the pathology of injury and technical aspects of reconstructive surgery. Few references are used throughout the text as the author states the book is designed to represent 40 years of his experience and thus, he provides a few 'suggested readings' at the end of each chapter that serve as key guides to more detailed literature.

Chapters 1 through 4 provide foundation information. Chapter 1 offers a very brief introduction to principles of hand surgery pertaining to the patient's reaction and emotional response to injury and the establishment of realistic goals. Chapter 2 provides a short overview of anatomic systems to include the vasculature, integumentary, musculature, and neurologic systems of the hand. Chapter 3 outlines basic tenets to managing hand injuries, including first aid intervention, basic pre- and postoperative care, and an introduction to surgical instrumentation and pharmacological intervention. Chapter 4 discusses various types of anesthesia used during surgery. The

information contained in these chapters is brief, and the reader will need to access additional sources for greater detail pertaining to each topic; however, in these chapters the author establishes a conceptual approach to address hand injuries that is used throughout the text.

Chapters 5 through 8 pertain to soft tissue injuries of the hand. Chapter 5 addresses injuries specific to the fingertip and fingernail, injection and avulsion injuries, crush and mangled tissue injuries, as well as animal and insect bites. Chapter 6 focuses on burns, chemical, cold, and electrical injuries. Chapter 7 describes various techniques for soft tissue replacement including donor sites, skin graft, and flap options. The greatest amount of attention is given to soft tissue flaps with considerable emphasis on the specific needs of different tissue regions from the fingertip to the abdomen. Chapter 8 discusses secondary repair of burned hands and includes basic information regarding the preparation, postoperative care, and complications associated with reconstruction.

Chapter 9 offers a succinct overview of radiographic imaging of the hand and wrist. Short descriptions of standard radiographs, arthrograms, computed tomography, magnetic resonance imaging, magnetic resonance angiography, video dynamic studies, and bone scintigraphy are provided. Again, the information in this chapter is cursory and provides only a basic description of the purpose and benefit of each procedure.

Chapters 10 through 13 address bone and joint disorders. Chapter 10 focuses on fracture management and healing that is specific to the hand. Chapter 11 is directed toward the management of fracture and dislocation injuries of the wrist. Chapter 12 specifically addresses injuries of the carpal complex with emphasis on carpal instabilities and scaphoid fractures including associated complications. Chapter 13 is directed toward skeletal injuries of the thumb and finger, including ligamentous disruption, dislocation, and fractures.

Chapters 14 through 16 focus on the topics of tendon injuries, nerve injuries, and vascular problems, respectively. A brief overview of tendon structure and nutrition is provided in Chapter 14 followed by discussion on the repair of extensor and flexor tendons at the vari-



ous anatomic levels of injury. This chapter includes a 10-page insert of colored illustrations of the structural anatomy of the hand and forearm. Chapter 15 focuses on nerve injuries with an emphasis on nerve lacerations. This chapter includes a concise overview of nerve classification/diagnosis, suture techniques, postoperative management, nerve grafting, and the functional impact of injuries involving the central nervous system. Chapter 16 pertains to vascular problems and provides a summary of treatment for a variety of conditions including crush and compound injuries, compartment syndromes, vasospastic disorders, amputations and reattachments, and transplantations.

Chapter 17 pertains to upper limb amputations and Chapter 18 focuses on upper limb prostheses. The various levels of digit amputation are discussed and the goal of reconstruction to gain function is emphasized for each level. Numerous types of prosthetic devices are presented in Chapter 18, and 3 pages of colorful pictures are included that illustrate various prosthetic options. The usefulness of active and passive prostheses is addressed for various levels of amputation. The written content of this chapter is limited; however, a number of impressive pictures are provided to illustrate the function and cosmetic effect of different types of prostheses.

Chapter 19 is directed at reconstruction of the thumb and sensory island flaps. This chapter provides a nice explanation on several surgical techniques to reconstruct the thumb including toe-to-hand transfer, thumb lengthening, finger-to-thumb transposition, and reconstruction options for total thumb loss. The written information is clear and direct and supplemented with outstanding illustrations and photographs.

Tendon transfers are the topic of Chapter 20. An introduction to the importance of an evaluation and the selection of appropriate muscles for transfer is provided, followed by an overview of tendon transfers for specific peripheral nerve palsies and paralysis due to spinal cord injuries. A brief discussion on postoperative management for tendon transfers is offered at the end of the chapter.

Chapter 21 deals with synovitis and tenosynovitis, and Chapter 22 focuses on arthritis of the hand and wrist. Common inflammatory disorders of the hand, wrist, and forearm are described and both conservative and surgical treatment options are presented in Chapter 21. Explanations, in general, are brief. In contrast, the information provided in Chapter 22 on various arthritic conditions is quite detailed. Different types of degenerative and

rheumatoid arthritis are discussed along with reconstructive options for varying levels of injury. Exceptional pictures and anatomical drawings are included to support the thorough explanations provided for each condition.

Upper limb pain is the topic of Chapter 23. Theories of pain perception are provided followed by a presentation of factors that impact pain perception. Intervention techniques to assist with pain management are offered that incorporate a multidisciplinary approach. The remainder of the chapter offers an overview to specific pain conditions including persistent pain related to amputations, glomus tumors, and complex regional pain syndrome.

Chronic connective tissue inflammatory disorders attributed to repetitive motion is the focus of Chapter 24. In this chapter the author discusses factors that contribute to the development of a chronic connective tissue condition rather than addressing specific disorders. Ergonomic and psychological factors are presented, as well as the role of the therapist in assisting patients to manage their condition. The chapter concludes with a personal note by the author in which he offers a hypothesis on the etiology of repetitive activity disorders.

Chapter 25 centers on compression neuropathies of the upper extremity. The pathophysiology and diagnosis of compression neuropathies are discussed first. Specific disorders involving compression of the peripheral nerves of the upper extremity are discussed separately. Both surgical and nonsurgical treatment options are presented. This chapter provides a thorough overview of the etiology and treatment of common nerve compression injuries of the upper extremity.

Chapter 26 is devoted solely to Dupuytren disease. The etiology, pathology, and treatment of Dupuytren disease are discussed. The author presents 4 basic types of surgical treatment and discusses, in detail, various aspects of the surgery including dissection techniques, z-plasties, skin excision, and grafting. Postoperative care is addressed and complications associated with surgery are presented. Overall, this chapter offers a thorough presentation of the surgical considerations associated with Dupuytren disease.

Chapter 27 is a brief, 2-page statement in which the author offers a few principles regarding upper limb tumor surgery. Here he provides a few suggestions on the manner in which to approach tumor pathology including the careful use of terminology, the importance of biopsy, and given the need for surgery, consideration

for prosthetic potential.

The diagnosis and treatment of infections of the upper limb are presented in Chapter 28. Specific conditions related to the hand are addressed as well as bite injuries, aquatic infections, necrotizing fasciitis, gas gangrene, and viral infections. Basic medical intervention, including antibiotic therapy, surgical drainage, and RICE protocol are discussed in brief.

A terse, 2-page statement on congenital anomalies is offered in Chapter 29. The author uses this space to offer his philosophical advice on surgical intervention for the young patient with a congenital anomaly of the hand.

The last chapter addresses hand therapy. Different aspects of therapy management are introduced; however, the majority of information in this chapter pertains to various modalities available for intervention. A brief overview of splinting options is provided to include static and dynamic splinting.

Overall, *Beasley's Surgery of the Hand* provides a nice compilation of injuries and surgical intervention for various disorders of the hand. The text represents the vast experience of one surgeon rather than a consensus of opinion that occurs with a more broadly referenced text and approach to treatment. As such, the level of detail provided on each topic varies considerably, and the author incorporates his personal philosophy on many occasions. All in all, the vast experience of one surgeon in the field of hand surgery and the time dedicated to the development of a comprehensive, wonderfully illustrated text is appreciated. Both physicians and physical therapists should find this book to be a useful resource on surgical reconstruction of the hand.

*Brenda Boucher, PT, PhD, CHT*



Jackson DW. *Master Techniques in Orthopaedic Surgery: Reconstructive Knee Surgery*. 2<sup>nd</sup> ed. Philadelphia, Pa: Lippincott, Williams and Wilkins; 2003, 460 pp., illus.

This text is one of a series of volumes designed to assist orthopaedic surgeons in their practices. The chapters are more than merely technical manuals describing surgical techniques, but rather easily followed operative techniques used by master surgeons who have many surgical cases to their credit. This very useable, well-illustrated second edition is a must for every resident's book bag and orthopaedic surgeon's desk.



Douglas W. Jackson, MD has done an excellent job editing this compendium text that combines contributions from 50 surgeons, carefully chosen for their expertise in the latest techniques and applied technology in reconstructive knee surgery. There are 5 separate sections that assist in organizing the plethora of information within this didactic text. These include: (1) Extensor Mechanism - Patellofemoral Problems, (2) Meniscus Surgery, (3) Ligament Injuries and Instability, (4) Intra-articular Fractures of the Tibia and Patella, and (5) Articular Cartilage and Synovium. Within each section are separate chapters that address specific, innovative surgical procedures. The authors write succinctly about the actual surgical techniques, clinical judgment, surgical experience, operating room methodology, and clinical decision making. Surgical indications and contraindications also are presented. The illustrations and clear, color pictorial examples help to accentuate the salient points made by the author and to bring the student and clinician closer to the actual operating room experience. Each chapter depicts how one selected expert performs a given surgery, not a consensus of many different methods or how they compare. All chapters are referenced to give the reader ample additional resources to further explore the literature and select, and then successfully execute the appropriate surgery for each individual patient.

The obvious expertise of each author and the user-friendly format of this surgical text are 2 very good reasons for physical therapists to take time to review this book, particularly if they are providing inpatient or outpatient rehabilitation for postoperative knee patients. There have been many advances in the operative treatment of knee disorders in the last 8 to 10 years, including an emphasis on less-invasive arthroscopic techniques. The reader may truly feel as if he is looking over the surgeon's shoulder as he reviews classic procedures, discover that some techniques that have changed as new technology has been incorporated, and explore new surgical techniques that have become popular among orthopaedic surgeons in the last few years. As rehabilitative professionals, the better understanding we have of the most current operative interventions, the greater our capacity for critical clinical decision making and the more successful our functional outcomes. This text is recommended reading for students and practicing clinicians alike.

*Roberta Kayser, PT*

Weintraub W. *Tendon and Ligament Healing: A New Approach to Sports and Overuse Injuries.* Brookline, Mass: Paradigm Publications; 2003, 236 pp., illus.

This text was written to explain the author's views and treatment techniques for chronic tendon and ligament injuries. Mr. Weintraub has 29 years of experience of structural/osteopathic therapy and is a Registered Movement Therapist with a master's degree in anatomy. He has written this book using his own experiences, and it is geared for the general public as well as clinicians.

There are 7 chapters in this book. An overview of the book is provided in the first chapter. The second chapter covers the anatomy and physiology of tendon and ligaments. The theory of electricity and magnetism within these connective tissues are presented along with different theories of how tendons and ligaments heal. Conventional and nonconventional theories are discussed. The author presents a therapeutic approach called Body-Mind Centering where de-differentiated cells can be activated and electromagnetic 'hook-ups' within ligaments can be realigned so that damaged, lax ligaments and tendons can either knit together or loosen as needed.

The third chapter introduces the manual therapy model that the author uses in the treatment of these injuries. The use of medications, injections, physical therapy, and surgeries is discussed superficially. The physical therapy mentioned focused mainly on modalities, exercise, and massage techniques. A very short sentence on joint mobilizations was included. The author describes the following as the approaches that he uses: strain/counter-strain, cranial therapy, body-mind centering, visceral manipulation, zero balancing, applied kinesiology, myofascial release, acupressure, and joint gliding. He emphasizes the necessity of being able to detect strains at a micrometric level, being able to inhibit his own central nervous system, and to be able to perceive and interact with the electromagnetic field of the patient. The author dedicates 4 pages to describe his background and how he has used his life experiences and education to formulate his treatment programs.

Seventeen case studies make up the fourth chapter. The case studies illustrate how the author's treatment techniques are used clinically. The author does use each patient's individual functional deficit to determine a successful outcome. He

also uses his palpation findings as an outcome. The fifth chapter summarizes the tissue changes made by the manual therapy techniques used in the case studies. Self-help Strategies is the title of the sixth chapter. In this chapter, recommendations are made regarding self treatment of injuries from the acute phase to resolution. Besides the conventional advice of rest, ice, etc, homeopathic salves and herbal anti-inflammatories are discussed. The progression of strengthening exercises is mapped out for the reader.

The author finishes this text with a conclusion where he compares and contrasts some of the patients in his case studies. He lists changes that he directly observed which includes: reduction of excessive muscular and fascia pulls; reduction of excessive, misplaced cross-linkage; and adhesion of fibers, improved vascular flow, restoration of normal parallel fiber arrangement, and proper modeling and remodeling of the tissue. He also lists reduced inflammation and restoration of normal joint mechanics.

This book contains numerous drawings of various structures, none of which are referenced as to their source. There are drawings of what adhesions, misalignment, and degeneration of tendon and ligament tissues look like but the reader does not know if this is from research or the ideas of the author. On page 69, he does state that an illustration depicting the electrical activity in a ligament was obtained from palpation. The author makes claims that he directly treats the golgi tendon organs by applying direct pressure to this small structure. Because of these issues, I would only recommend this text for clinicians who practice extensively in the alternative medicine approaches that the author practices.

*Jeff Yaver, PT*





# Highlights from CSM Anniversary Celebration



## 2004 CSM Award Winners

### OUTSTANDING PHYSICAL THERAPY STUDENT AWARD

The purpose of this award is to identify a student physical therapist (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.



**John Popovich** received his baccalaureate and masters degrees from the University of Hawaii. He will graduate in May 2004 from the Doctor of Physical Therapy (DPT) program at the University of Southern California. The mission of the University of Southern California's DPT program is to educate authoritative practitioners and future leaders in the profession of physical therapy. Mr. Popovich embraced this mission wholeheartedly through his pursuit of excellence in the clinical arena and his voluntary involvement in rehabilitation science research. He was selected to complete a full-time internship at Rancho Los Amigos National Rehabilitation Center. In this clinical setting he demonstrated superb communication, interaction, and education skills with patients and colleagues. His research included participation in the development of reliable physical assessment tools to measure foot morphology in persons with rheumatoid arthritis and in a second funded research project investigating the biomechanical and clinical characteristics of the lumbar spine under loaded and unloaded conditions in symptomatic and asymptomatic subjects. John Popovich is truly an outstanding student, soon to become an insightful and well-educated practicing physical therapist with a tremendous potential to contribute to the Orthopaedic Section of the APTA.

### JAMES A. GOULD EXCELLENCE IN TEACHING ORTHOPAEDIC PHYSICAL THERAPY AWARD

This award is given to recognize and support excellence in instructing OPT principles and techniques through the acknowledgement 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,

servicing as a mentor and role model with evidence of strong student rapport. The instructor's techniques must be intellectually challenging and promote necessary knowledge and skills.

**Donald A. Neumann**, PT, PhD is the 2003 recipient of the James A. Gould Excellence in Teaching of Orthopaedic Physical Therapy Award. Dr. Neumann is an Associate Professor of Physical Therapy at Marquette University where he is responsible for teaching the kinesiology content of the curriculum, providing the necessary background for the understanding of the etiology of various dysfunctions of the musculoskeletal system, and the examination and treatment of these dysfunctions. Dr. Neumann is also an Associate Editor of the *Journal of Orthopaedic & Sports Physical Therapy*, as well as author of the textbook *Kinesiology of the Musculoskeletal System: Foundations for Physical Rehabilitation*.

During his tenure at Marquette University, Dr. Neumann has developed an unparalleled reputation as a teacher and has been recognized with honors such as the Marquette University 'Teacher of the Year Award' in 1994 and the APTA 'Dorothy E. Baethke-Eleanor J. Carlin Award' in 1997. On an even wider forum, his most recent distinction is as a recipient of a Fulbright Scholarship (Fall 2002) to teach kinesiology to physical therapy students in Lithuania. Dr. Neumann's public speaking abilities, depth of knowledge, and enthusiasm instill in his students the willingness and desire to learn. His ability to create an environment where students truly enjoy the learning process distinguishes Dr. Neumann as an exceptional educator.

Dr. Neumann's teaching extends beyond the traditional classroom. He is a frequent invited speaker at regional and national conferences, where his presentations are always highly rated. While he has spoken on a variety of topics, he is highly regarded for his work on protection principles for the hip with osteoarthritic changes. This recognition is in large part a result of his direct contribution to this body of knowledge through his own research, which has direct application to physical therapy management of persons with arthritis or joint replacement of the hip. The relevance of this work to the practice of physical therapy was recognized nationally when Dr. Neumann was awarded the first 'Steven J. Rose Endowment Award' for excellence in orthopaedic physical therapy research in



1989, and the 'Jack Walker Award' for the best article on clinical research published in *Physical Therapy* in 1999.

Dr. Neumann is a master teacher/lecturer, well deserving of this honor.

### ROSE EXCELLENCE IN RESEARCH AWARD

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.

The recipient of the 2004 Rose Excellence in Research Award is **Timothy Flynn, PT, PhD, OCS** for a manuscript entitled *A Clinical Prediction Rule for Classifying Patients with Low Back Pain who Demonstrate Short-term Improvement with Spinal Manipulation* published in *Spine*. 2002;27(4):2835-2843. The coauthors of this article are Julie M. Fritz, PT, PhD, ATC; Julie M. Whitman, PT, DSc, OCS; Robert S. Wainner, PT, PhD, ECS, OCS; Jake Magel, PT, DSc, OCS; Daniel G. Rendeiro, PT, DSc, OCS, FAAOMPT; Barbara K. Butler, PT, OCS; Matthew B. Garber, PT, DSc, OCS, FAAOMPT; and Stephen C. Allison, PT, PhD, ECS.

Dr. Tim Flynn received his physical therapy degree from Marquette University, his MS in Biomechanics from the College of Osteopathic Medicine at Michigan State University, and his PhD in Kinesiology from the Pennsylvania State University. His professional experience and training have been primarily in orthopaedics and manual medicine encompassing several schools of thought. In addition, he received an advanced individual manual medicine tutorial with Philip E. Greenman, DO, FFAO, author of *Principles of Manual Medicine*. Dr. Flynn is board certified in Orthopaedic Physical Therapy and is a Fellow of the American Academy of Orthopaedic Manual Physical Therapists. He has served as lecturer in professional and postprofessional physical therapy programs. He has presented research at state, national, and international meetings. Dr. Flynn has published 5 book chapters, 20 peer-reviewed manuscripts in journals including *Spine*, *JOSPT*, *Physical Therapy*, *Archives of Physical Medicine & Rehabilitation*, and *Gait & Posture*, and over 20 abstracts on orthopaedics, biomechanics, and manual therapy issues. He was also



the editor and author of the Butterworth-Heinemann textbook *The Thoracic Spine and Ribcage-Musculoskeletal Evaluation & Treatment* and author of 3 educational CD-ROMs on Orthopaedic Manual Physical Therapy. Dr. Flynn has received research grants from the Department of Defense, Foundation for Physical Therapy, and the Texas Physical Therapy Education and Research Foundation. He was the senior Army Medical Department consultant for the Department of Defense & Veterans Administration Clinical Practice Guideline Workgroup on low back pain and sciatica in primary care. He has received numerous awards to include the James A. Gould Excellence in Teaching Orthopaedic Physical Therapy from the Orthopaedic Section and the Distinguished Alumnus Marquette University Program in Physical Therapy. Dr. Flynn is the past Director of the U.S. Army-Baylor University Graduate Program in Physical Therapy and is currently an associate professor in the Department of Physical Therapy at Regis University.

#### PARIS DISTINGUISHED SERVICE AWARD

The purpose of this award is to acknowledge and honor a most outstanding Orthopaedic Section member whose contributions to the Section are of exceptional and enduring value.



**William G. Boissonnault, PT, DHSc** is the 2004 recipient of the Orthopaedic Section's Paris Distinguished Service Award. Bill has served the Section in many capacities since becoming a member in 1981. Most importantly, he served as President of the Section from 1995-2001.

During his 2 terms as President, Bill fostered the development of clinical residency and fellowship programs in orthopaedic physical therapy and manual physical therapy. He worked hard for APTA's credentialing of these programs and helped to establish a grant program for programs in the developmental stages. Bill also appreciated the wonderful diversity of clinical interests within the Section and encouraged the growth and development of Special Interest Groups. These groups flourished during Bill's tenure because of the support that they were given by the Section leadership.

Bill worked hard to advance clinical

research in physical therapy. In an attempt to make the best use of the Section's investment in research, he asked the Foundation for Physical Therapy to study the best and most efficient use of donor dollars. The result of that appeal is the Foundation's Clinical Research Network that is currently in operation today. The Orthopaedic Section is a major donor to this project and is highly respected as a supporter of clinical research in physical therapy. Bill was awarded the Foundation's Charles Magistro Award for his support of the Foundation and physical therapy research.

Bill worked many hours behind the scenes of *JOSPT* to assist in the transition to self publishing, the relocation of the office, and the hiring of a new editor. Bill continued to work on this project after his term of office was completed. It is largely because of his hard work that the Orthopaedic and Sports Section members enjoy the highly respected journal that we receive monthly.

Bill is a genuine, caring ambassador for orthopaedic physical therapy. He serves as a role model for students, members, and leaders alike. The Orthopaedic Section is fortunate to have had Bill as its leader. There is no one more deserving of the Paris Distinguished Service Award than Bill Boissonnault.

## CSM 2004 Annual Business Meeting Nashville, Tennessee February 7, 2004

### I. CALL TO ORDER AND WELCOME – President, Michael Cibulka, PT, MA, OCS

- A. The agenda was approved as printed.
- B. The annual membership meeting minutes from CSM in Tampa, Florida on February 15, 2003 were approved as printed in Volume 15;1:03 issue of *Orthopaedic Physical Therapy Practice*.

### II. UNFINISHED BUSINESS

The two unfinished business items were deferred to the Practice Committee report.

### III. INVITED GUESTS

- A. Foundation for Physical Therapy - Nancy White, PT, MS, OCS – President/Chair  
Nancy thanked the Section for all its support over the years and Kornelia Kulig, lead investigator, gave an update on the Clinical Research Network (CRN).

### B. Education Manipulation Task Force – Ken Olson, PT, DHSC, OCS, FAAO

The final draft of the Manipulation Education Manual will be completed in March 2004 and be ready for dissemination in April 2004. Activities of the task force related to this manual will be completed at the end of 2004. The task force will continue after that under the direction of Chair, Bill Boissonnault, with assistance from the Orthopaedic Section, APTA and AAOMPT.

### C. PT-PAC – Dennis Langton, PT

As an assistant to Government Affairs staff Dennis works on issues before Congress regarding physical therapy. Specifically, issues on campaigns for Congress who share interests with the Orthopaedic Section. The PT-PAC fund is in need of \$1.5 million and they currently have \$800,000.

### IV. NEW BUSINESS

- A. =**MOTION 1**= Ms. Gwendolyn Simons moved to distribute ballots for Section elections to all members by publishing in *Orthopaedic Physical Therapy Practice* and sending via electronic mail. **ADOPTED**
- B. =**MOTION 2**= Mr. James Irrgang moved to amend the bylaws to change the name of the Public Relations Committee to the Public Relations/Marketing Committee. **ADOPTED**
- C. A call for nominations from the floor for the 2005 election was made. Positions available are Treasurer; one Director; and one Nominating Committee Member. No nominations were brought forth.

Reports from the Board of Directors, Committee Chairs, and SIG Presidents can be accessed via our website at [www.orthopt.org](http://www.orthopt.org).

ADJOURNMENT 11:00 AM

# CSM Board of Director's Meeting Nashville, TN • February 5, 2004

## MINUTES

The 2004 CSM Board of Directors Meeting was called to order at the Opryland Hotel at 4:30 PM on Thursday, February 5th by Michael Cibulka, President.

### ROLL CALL:

#### Present:

Michael Cibulka, President  
Lola Rosenbaum, Vice President  
Joe Godges, Treasurer  
James Irrgang, Director  
Gary Smith, Director  
Paul Howard, Education Chair  
Ellen Hamilton, Education Vice Chair  
Kelley Fitzgerald, Research Chair  
Adam Smith, Membership Chair  
Mary Ann Wilmarth, HSC Editor  
Steve McDavitt, Practice Chair  
Rob Rowe, Practice Vice Chair  
Terry Randall, Public Relations Chair  
Susan Appling, OPTP Editor  
Chris Hughes, incoming OP Editor  
Stephen Reischl, FASIG President  
Joe Kleinkort, PMSIG President  
Jeff Stenback, PASIG President

Jim Dunleavy, APTA Liaison  
Terri DeFlorian, Executive Director  
Tara Fredrickson, Executive Associate

#### Absent:

Tim Flynn, Nominating Committee Chair  
Robert Johnson, Specialization Chair  
Deborah Lechner, OHSIG President  
Deborah Gross-Saunders, Animal PT SIG

\*\*\*\*\*

The agenda for the 2004 CSM Board of Directors meeting was approved.

The January 13, 2004 Board of Director Conference Call minutes were approved as printed.

The Board of Directors reviewed the To Be Completed Items.

An update on the APTA's review of the Actor's Equity Recommendations from the PASIG is pending on clarification from the APTA.

**=MOTION 1=** Mr. Howard moved that the Orthopaedic Section Guidelines for

Speaker Payment be revised to reflect a decrease in the CSM short program speaker honorarium from \$300 to \$200 per speaking hour. ADOPTED (unanimous)

The Board of Directors charged the Section office to draft a conflict of interest statement and bring to the March Board of Directors conference call.

The Ad Hoc Committee to Review Grant Applications for Practice Analysis reported that they reviewed the technical report for the PASIG practice analysis and determined it was very well done. Some changes were suggested. The plan is to have the practice analysis submitted to *JOSPT* for publication with an executive summary to be distributed by the Section. The practice analysis should be posted to the PASIG portion of the Orthopaedic Section web site.

Terri DeFlorian reported that the process of reformatting the Section policies based on the finance policy format will begin after CSM.

Board of Directors were assigned to attend the SIG business meetings at CSM and bring a report back to the Board at their March conference call meeting.

**=MOTION 2=** Mr. Cibulka moved to approve the 2004-2007 Orthopaedic Section Strategic Plan. ADOPTED (unanimous)

**=MOTION 3=** Ms. DeFlorian moved to approve the 2004-2007 ISC Editor contract. ADOPTED (unanimous)

**=MOTION 4=** Ms. Rosenbaum moved to up the approved Strength and Conditioning ISC from 2006 to late 2005. ADOPTED (unanimous)

**=MOTION 5=** Ms. Rosenbaum moved to approve the following ISC registration fees for the Current Concepts course beginning in 2006:

Orthopaedic Section members \$200 increased to \$225

Non-Orthopaedic Section members \$425 increased to \$475 ADOPTED (unanimous)

**=MOTION 6=** Mr. McDavitt moved to appoint Bob Rowe as the new Practice Committee Chair beginning in 2004 at the close of the CSM Business Meeting. ADOPTED (unanimous)

**=MOTION 7=** Mr. Smith moved that he discuss with the Animal Physical Therapist SIG possible educational alternatives and report back to the Board of Directors on their March conference call. ADOPTED (unanimous)

**=MOTION 8=** Mr. Cibulka moved to follow the recommendations from the Finance Committee regarding the Arkansas Chapter grant of \$10,000. ADOPTED (unanimous)

Jim Dunleavy reported on the APTA November Board of Director's Meeting.

Mike Cibulka reported on the APTA Component President's Meeting at CSM.

The Board of Directors discussed author honorariums for the Current Concepts ISC update in 2006 and decided, unanimously, to pay the authors the full honorarium of \$1,400.

Tom McPoil was appointed the new Awards Committee Chair for 2004-2007.

The Board of Directors discussed contributing to a combined party of sections at CSM to save money and cut down on the number of parties people need to attend. No decision was made as this time.

ADJOURNMENT 10:00 PM

Submitted by Terri A. DeFlorian, Executive Director

(Adopted by BOD 3/11/04)

## Defending PT Practice Rights and Privileges in the Military

In 2001, the “*Demonstration Project*” brought Chiropractors into the military as a benefit for active duty. Last year, Stephen McDavitt, PT, MS, FAAOMPT started working and consulting with Col. Eva M Eckburg (Air Force) to resolve related co-treatment issues of care delegated to PTs and chiropractors while treating in the Air Force. Col. Eckburg was recently informed of her success in resolving those issues. In accordance with the recent announcement directly from the Assistant Surgeon General, Health Care Operations, Office of The Surgeon General, co-treatment is now a collaborative *option* in directing patient care in client/patient management between chiropractors and physical therapists. During the Orthopaedic Section Business Meeting at APTA’s Combined Sections Meeting in Nashville, Steve was surprised when he was awarded a commemorative Air Force coin and pin as a token of appreciation from the United States Air Force for his assistance.



## REQUEST FOR RECOMMENDATION FOR ORTHOPAEDIC SECTION OFFICES

The Orthopaedic Section needs your input for qualified candidates to run for the office listed below. If you would like the opportunity to serve the Section or know of qualified members who would serve, please contact the Orthopaedic Section office.

Director: (3-year term) Takes on the responsibility and duties and acts as liaison to various committees as designated by the President.

Treasurer: (3-year term) Should have good working knowledge of accrual accounting, annual and long range budgeting, reserve funds and investment strategies. Nominees will have served on the Finance Committee for no less than one year from the time they would assume the office of Treasurer.

Nominating Committee Member: (3-year term; 2 yrs. as Member, 1 yr. as Chair)

- Responsible for networking and recruiting viable candidates to fill upcoming office vacancies.
- Time commitment would include related communication, phone calls, and attendance (as appropriate) at CSM.
- The Nominating Chair should be prepared to attend the Fall Board Meeting, if asked to do so by the Board of Directors.

Please contact Tara Fredrickson at the Orthopaedic Section office on or before May 21 with recommendations.

tfred@orthopt.org • 800.444.3982 ext 203



# OCCUPATIONAL HEALTH PHYSICAL THERAPISTS SPECIAL INTEREST GROUP



ORTHOPAEDIC SECTION, APTA, INC.

Winter 2004

Volume 16, Number 2

## Networking: The Beginning of the End for Building an Occupational Therapy Practice

*John O'Malley, President, Strategic Visions Inc., Birmingham, AL*

Networking is as old as mankind. Everyone has the ability to network; some people just work at it more diligently than others. Networking is the beginning of the end; I say that because since the beginning of time no person ever succeeded on his or her own, no one. Without a network, the end is predictable; you will not achieve your fullest potential in your personal and professional life. If your therapy practice is not where you want to be, chances are you are not networking enough or perhaps compiled a weak network. The first rule of networking is: It's not what you know but whom you know. Every human being starts life networking; first by bonding with his or her mother (first by scent), expanding its network or link to other members of the social network, family, progressing to relatives and in time, outsiders. Babies have many ways to quickly convey with others how cute, warm, and cuddly they are, their hug-ability factor. This 'linking of identity' is the baby's innate mechanism for survival. The more people who care about the baby the better are its chances for survival. In the business world, linking your identity is just as important to your survival, maybe more so. Your hug-ability factor is replaced with a trust-ability factor, the link to productive networking.

To my way of thinking, networking can be divided into 2 basic segments, informal or social networking: family, relatives, and friends, and formal or business networking, more in line with business and professional relationships. Though the social network is also important in business, this article focuses on the latter from a therapist's perspective.

Networking should be approached as strategic in nature (necessity), a connecting opportunity (self-promotion) and not a selling activity, though setting an appointment to discuss someone's needs might happen with a timely connect. Further, strategic networking is all about multipliers and prospecting. The second rule of networking is: *The more people in your network the better.* Amassing as many qualified multipliers as possible that could coach, mentor, refer, or just plain help you succeed in life is paramount in highly competitive professions and industries. Multipliers can be both people and organizations, ie, a professional association or society is generally a great multiplier, especially if you are a significantly active member. Certain people make great multipliers, those individuals who take an unselfish interest in you. Family, relatives, friends, partners, business relationships, and the everyday people you encounter are networking opportunities and just might make great multipliers. Another word for multipliers is advocates, those who proactively promote you to others, especially without being asked or seeking personal gain. The third rule of networking is: *Value people who want to see you succeed and reciprocate by becoming an advocate for their success.* Effective networking is more than a clique; it reaches out opening doors to diversity, informal communications, and greater insight to the world around you, other people's networks, and otherwise missed opportunities. Though there are exceptions, a shallow network (limited associates or members who for the most part know each other) offers little return on individuals within the network. Redundancy in network connectivity limits a network's overall effectiveness.

Consider networking a form of public relations, self-PR that is, you have to get the message out about who you are,

what you care about, and how you help people. Great networking creates a BUZZ about you and your company that spreads like wildfire throughout the business community. You will find networking becomes easier when you have a prepared you-formercial, a 10 to 30 second proclamation about who you are and what you do, often referred to as an elevator message. The purpose of a you-formercial is to engage, educate, and energize; in other words, to get the other person's undivided attention, create interest to know more, and inspires them to say, "Tell me more." A good networking you-formercial tells who you are, who are your typical clients, problems you help others solve, who are frustrated by . . . , who are concerned with . . . , who are upset because . . . , who are under pressure as a result of . . . , and who are mad about . . . As an example, one of my you-formercial goes like this: Hello, my name is John, John O'Malley, I help struggling people and companies succeed at what they do or want to do by helping them increase performance, productivity, and profitability through achieving strategic balance. The typical response to my you-formercial is "What is strategic balance?" The networking gate has just swung open; stand back and have a seat, it's show time. Keep in mind that your you-formercial is useless unless you practice, practice, and practice until you reach the point where your you-formercial becomes second nature, effortlessly rolling off your tongue with no hesitation. In referral development (sales), it's important to have an arsenal of you-formercial that you can draw upon depending on the situation; this helps make you fluid in thought and presentation. Also completing a BIZ-formercial about your practice, products, and service is also mighty helpful when confronted with limited time, and should time permit, you can string many BIZ-

formercials together to create interesting dialog of substance.

Confident with your networking you-formercial you are now ready for the next step, building trust quickly with those you come in contact with during a networking opportunity. A networking opportunity is any occasion that you meet someone informally, socially, or professionally. Just as many people judge a book by its cover, when someone sees you for the first time they subconsciously form a like or dislike opinion about you, and do so in about 5 to 7 seconds; that includes your patients. What does your cover say? The fourth rule of networking is: *Get people to like you so you can build trust quickly.* Helping others to like you is easier if you practice the 5 following steps to conveying trust when meeting another person for the first time—every time for that matter: 1. Project confidence and a positive attitude, 2. **Set** eye contact with the person you are meeting, 3. **Smile** with authenticity, 4. Maintain eye contact when talking and while they're talking, and 5. **Synchronize** with the other person; assume their body language and key words or phrases. Offer a firm handshake (without squeezing the blood out of their fingers) to both men and women and expect the same in return; women should not be timid about handshaking.

Working a room and engaging people while networking is one thing, getting a person to talk to you is another. The author has found that the key is authenticity; be you, don't spin a factious facade that will entrap you later. On occasion when you first meet someone it might be easier to reserve your you-formercial and lead with an opening question that causes the other person to respond, breaking the ice and at the right moment, usually right after his or her response, introduce yourself using your you-formercial. Three effective opening networking questions are: "What do you think about . . .?", "Tell me about . . .", and "What is your opinion on . . .?" Also remember not to become a network-hog, let the other person talk, especially about their interests and by all means show interest in what they are saying by maintaining eye contact and reinforcing body language.

Everyone in business knows what business cards are for don't they? Well,

if you're proud your box of business cards has lasted several years and is still half full, it's a good sign that you don't. Business cards are bought to give away; that's right; give the darn things to other people. Your business card says a lot about you especially if you print insightful information on the reverse side. You don't print on both sides? Every business card given out has the potential to drive business your way, drive revenue up, and drive your competition out of business. When networking carry your business cards in one pocket "the give pocket" and use another pocket for the "receive pocket." This simple approach keeps you from giving someone else's business card as your own. Show respect, read the business card before sticking it in a pocket. Do you remember which pocket? Ask permission to write on it if you want to take a note. Never give a business card to someone while you are talking to them but extend it, releasing it when you finished your you-formercial, if not they will be reading your card and not listening to what you are saying. Business cards; don't leave home with out them or come home with them.

The fifth rule of networking is: *Give more value by establishing a network of professionals, vendors, and services sought by others.* When you create a Value Added Network (VAN) your network takes on another role, that of helping your clients, prospects, and friends locate needed services, professional or otherwise; this provides your network with referrals, thus strengthening your network relationships. Reciprocating is the super glue of strong and productive networks.

Don't get caught napping when it comes to working your network or you will find yourself caught in the net of stagnation. Which leads us to the sixth rule of networking: *Create a networking action plan (NAP), that keeps your network vibrant.* Just as fishermen must continue to repair their worn and damaged nets or suffer the consequences of their catch slipping through the holes, you must also maintain your network in good working order or relationships and potential opportunities (business) will slip away. The solution to maintaining a productive network is to create a Network Action Plan that provides the crucial structure to your network acquisition, retention, and cultivation activi-

ties. Your NAP should provide the follow-up wake-up call of the things you need to do that makes you memorable after connecting with and bringing someone into your network Your network becomes most effective when you don't proactively sell directly to network members, instead focus your activities on building trust, a strong relationship, and a vehicle for driving other's success. Remember to give more than you receive and in time you will receive more than you gave. The seventh rule of networking is: *Out of sight, out of mind.* Segment your network into contact groups or hubs by referral potential, influence, industry, or service, then give each network member a priority contact rating that assigns a contact frequency schedule, contact methodology, and contact content. As an example, some network members need to be contacted weekly, some annually depending on their network unit value (NUV), or relationship asset. Create a plan, work your plan, and plan to work.

You should find it easy to use an existing CRM program into a Network Relationship Management program. A network is like a plant, it will grow if you meet its needs: feed it, water it, and prune it—keeping it to a manageable size or density. Many means exist for staying in contact with your network members, two good ways are face-to-face (visits) and ear-to-ear access (telephone), followed by a handwritten card (it shows you have taken the time to reflect on the meeting), a short e-mail, sending an article of interest, informative newsletter, updates via your website for network members only, and even a special card or holiday cheer. Your communicating options are only limited by your gray matter and networking matters so abide by the 8 rule of networking: *Never stop networking.* Stop networking and your private and professional life will suffer. What are you waiting for; send this article to everyone in your business-network!

For a complete listing of OHSIG officers please visit our website.



# FOOT & ANKLE

## SPECIAL INTEREST GROUP

### PRESIDENT'S REPORT

Although you will read this later in the year, the Combined Sections Meeting in Nashville is just a few days old. The meeting was, from my perspective, a complete success. From a personal level, it is always so uplifting to see colleagues again and listen and discuss the changes in their professional and personal lives over the year.

From the FASIG standpoint, we had an excellent meeting. The 4 hours of presentations in the Orthopaedic Section programming were extremely well attended. At the Business Meeting, elections were held and the following members are the officers of the FASIG:

President: Steve Paulseth  
Vice President: Cheryl Maurer  
Secretary/Treasurer: Mark Cornwall

Cheryl Maurer as the Vice President will be in charge of the programming for the CSM 2005 meeting which will take place in New Orleans, LA. During the Business Meeting at CSM, several ideas were brought up as possible topics. Questions, ideas, and possible presenters can be given to Cheryl with her current email and phone address in this portion of the newsletter.

I wish to thank the presenters that spoke during our programming this year. They are Lisa Selby-Silverstein, Rob Martin, and Byron Russell. Their presentations are available on the Orthopaedic Section website ([orthopt.org](http://orthopt.org)) under the CSM heading.

### RESEARCH RETREAT

The second foot and ankle research retreat will be April 30 and May 1 at the Department of Biokinesiology and Physical Therapy, University of Southern California. Please refer to the Orthopaedic Section website and go on to the Special Interest Groups. Under the FASIG will be the program speakers, highlighted by the two keynote speakers who are Arne Lundberg and Neil Sharkey. Please make every effort to attend the conference. Those with email, you will be receiving notices for the meeting. The proceedings of the meeting will be published in *JOSPT* later in 2004.

Finally I would like to thank many people for allowing me to assist the Orthopaedic Section in its mission of

Education, Practice, and Research. In my position I have dealt with the administrative staff of the Section and they have always been helpful. The Orthopaedic Section Board of Directors, the officers of the FASIG, and the other SIGS have worked hard in these same 3 areas. I look forward to staying connected to the FASIG and will continue assisting as a member of the Nominating Committee.

*Sincerely,*  
Steve Reischl, DPT, OCS

### FOOT & ANKLE OFFICER LISTING

#### CHAIR:

Stephen G Paulseth, PT, MS (310) 286-0447  
1950 Century Pk E (310) 286-1224  
Los Angeles, CA 90067-4708 [stephen@paulsethpt.com](mailto:stephen@paulsethpt.com)

#### VICE PRESIDENT:

Cheryl Maurer, PT (617) 489-3993  
41 Westford St (617) 489-5004  
Saugus, MA 01906 [cheryl@functionalmechanics.com](mailto:cheryl@functionalmechanics.com)

#### SECRETARY/TREASURER:

Mark Cornwall, PT, PhD, CPed (925) 523-1606  
Box 15015 [mark.cornwall@hau.edu](mailto:mark.cornwall@hau.edu)  
Flagstaff, AZ 86011

#### NOMINATING CHAIR:

Byron Russell, PT (509) 368-6608  
EWU Dept PT (509) 386-6623 FAX  
310 North Riverpoint Blvd [bryon.russell@mail.ewu.edu](mailto:bryon.russell@mail.ewu.edu)  
Spokane, WA 99202

#### PRACTICE CHAIR:

Joe Tomaro, PT, MS, ATC (412) 321-2151  
490 East North Ave, Suite 501 (412) 434-4909 FAX  
Pittsburgh, PA 15212 [jtomaro@teamhmi.com](mailto:jtomaro@teamhmi.com)

## Fundraiser for the Minority Scholarship Fund

The 12<sup>th</sup> Annual Fundraiser for APTA's Minority Scholarship Fund Diversity 2000 & Beyond: Commitment for the 21st Century is scheduled for Saturday, October 2, 2004 at the Hyatt Regency St. Louis at Union Station, St. Louis, MO. The Fundraiser is being co-hosted by the

Academic Administrators Special Interest Group of the Section for Education and the Missouri Clinical Educators Consortium. Single ticket prices for the dinner/dance are \$100. Contributions of any amount are welcome. You can also participate by donating items for

the Silent Auction. Ad space in the souvenir book may be purchased at \$500 for a full page, \$250 for a 1/2 page, and \$100 for a business card. For further information, please contact APTA's Department of Minority/International Affairs at 1-800-999-2782 ext. 3144.



## Performing Arts Special Interest Group • Orthopaedic Section, APTA

### MESSAGE FROM THE PRESIDENT

I hope that everyone thoroughly enjoyed Nashville and our National Combined Sections Meeting! It is always wonderful to see all of you again in person—even though this seems to be limited to once per year. Our first preconference course, “Introduction to Dance Medicine,” was a resounding success thanks to the efforts of our speakers—Brent Anderson, Shaw Bronner, Jennifer Gamboa, and Marshall Hagins. We were fortunate to have 2 dancers from the Nashville ballet as demonstrators and they contributed to the course greatly. Thanks also to Lisa Sattler (and Scott Stackhouse) for their help in compiling handouts. Once again, our general programming was excellent and Lynn Medoff did an outstanding job coordinating this, as well as our reception. Thanks also to the string quartet from Belmont University’s School of Music. We appreciate their participation in making our reception warm and inviting.

Please join me in welcoming our two newest board members, Tara Jo Manal (Vice President and coordinator for general programming) and Julie O’Connell (Secretary). Each of them makes a wonderful addition to our executive board. As happens when we welcome two new executive board members, two others step off the board and Lynn Medoff (outgoing Vice President) and Susan Clinton (outgoing Secretary) will be missed. Thanks to you both for all of your hard work. I especially appreciate the ability that both of these two had for taking initiative and getting the job done. You’ve certainly made my job that much easier.

Our Business Meeting was busy and full of ideas. Since we have completed our Description of Specialized Clinical Practice (DSCP) we will be using these identified competencies to guide future coursework as well as the direction of our SIG. As a result of my participation in the Orthopaedic Section’s strategic planning back in October, it became clear to me that we needed to take our completed DSCP and develop more of a strategic plan for ourselves within the PASIG. We have chosen to do this while guided along 3 basic tracks: an education track, a practice track, and a research track. By working towards developing such a plan, we will be better guided in our efforts to make sure that our PASIG courses are competency-based and help develop the advanced skills identified in our DSCP. The same will be able to be said about practice issues and through identifying research areas. Advancements within our special interest area will not occur just by chance, but will have more direction as a result of establishing such a plan. We need volun-

teers who are interested in discussing how these 3 tracks will look, what skill sets we want to address first, and help direct where we want to place our focus for the next couple of years. The APTA’s Vision 2020 is moving us along towards a specific goal, and the area of performing arts physical therapy will need a bit of direction if we are to meet that goal together.

As we complete the DSCP document approval process, each of you can (and need to) have a voice. I challenge all of you to get on the bandwagon and start looking at how our SIG needs to grow. What research would you like to see done that relates to the performing arts? What evidence are we lacking that would move us towards true evidence-based practice? What educational components are not yet in place? How would the competencies identified within our DSCP best be put into action or taught? What aspects of practicing within the performing arts need further work? How might practice issues be addressed? These questions are only the tip of the iceberg. By asking these questions as well as others, we will begin to focus our direction, our scope of practice and our strategic agenda for the next several years—a blueprint for our special interest area. Look around you. Your profession is definitely changing and growing. It is time that we step up and see where performing arts physical therapy needs to go next. I challenge each of you to take that step. I look forward to working with each of you.

Sincerely,  
*Jeffrey T. Stenback, PT, OCS*  
President, Performing Arts Special Interest Group

### 2004 PASIG BUSINESS MEETING MINUTES

Combined Sections Meeting  
Nashville, TN  
February 5, 2004

**CALL TO ORDER and WELCOME** – 6:35 PM – Jeff Stenback, President

**MOTION:** To approve the minutes from the Business Meeting at CSM in Tampa, FL on February 14, 2003, as printed in the spring 2003 issue of *Orthopaedic Physical Therapy Practice*. **PASSED.**

### EXECUTIVE COMMITTEE REPORT:

**A. Jeff Stenback, President:**  
Past Year’s Activity:

1) Preconference course—the PASIG held their first pre-conference course on February 4<sup>th</sup> titled 'Introduction to Dance Medicine.' Special thanks to Marshal Hagins, Jennifer Gamboa, Shaw Bronner, and Brent Anderson for teaching the course. Each were given certificates of appreciation. Thanks to Lisa Sattler and Scott Stackhouse for their assistance in compiling the course handouts. Jeff would like to consider expanding this course and holding it at an offsite venue in the future. The course was advertised in the *JOSPT*, the *OPTP*, and on the website. There was discussion about future advertising, but this will be limited due to budgetary constraints. Jeff asked the membership to consider ideas for future preconference courses and general programming.

2) Actors Equity—in January 2003, the PASIG was contacted for recommendations regarding stage surfaces, ramps and rakes, and for guidelines for risk assessment and injury prevention. Jeff Stenback, Shaw Bronner, and Marshall Hagins attended a meeting in New York and ultimately offered recommendations to Actors Equity regarding qualifications for health care personnel that could assist the Union with identifying potential risk to their membership. The Orthopaedic Section supported these recommendations and Actor's Equity is incorporating the recommendations into upcoming contract negotiations. Jeff has asked any membership willing to work on this task force to please sign up again today.

#### **B. Adrienne McAuley, Treasurer:**

Adrienne reported that many of the budget surpluses from last year were taken up this year for nominations/elections, CSM 2004 reception, and general programming speaker fees. She is able to better predict accuracy with expenditures due to the decreased use of phone calls and letters and the increased use of email. One example cited was the decrease of brochure sales due to the increased use of email to reach membership.

In a discussion concerning other ways to use budgeted funds, several ideas were presented: (1) PASIG advertising dollars to be spent in various magazines promoting dance and music, although this was discussed as very expensive and therefore not really feasible; (2) small research funds for student groups and grants to help with research; and (3) possible use of some funds to sponsor a student interested in the performing arts to CSM 2005. The membership is encouraged to send all ideas to Adrienne by email: [mcauley@painpoints.com](mailto:mcauley@painpoints.com).

#### **C. Lynn Medoff, Vice President:**

The CSM general programming concentrated mostly on the treatment of musicians since we had presented a preconference course on dance medicine. The first 2 hours of the programming was cosponsored by the Hand Section and featured Lori Storko, OTR, CHT who presented on ergonomic adaptations of musical instruments. The research portion of the programming featured Shaw Bronner, PT, MHS, EdM, OCS who presented her research on dance injury analysis and a presentation by Jennifer Gamboa, MPT, OCS and Marshall Hagins, PT, PhD on the Description of Advanced Clinical Practice for performing artist physical therapists. Lynn Medoff, MPT, MA and Nick Quarrier, PT, OCS educated participants in the analysis of playing posture and mechanics during an interactive session with a violinist and flutist.

"I enjoyed working with the executive board of the PASIG and I thank all speakers and members who have helped with

our programming. We welcome suggestions for future programming from the membership along with feedback/suggestions on programming for CSM 2004. Please contact the new Vice President and Education Chair, Tara Jo Manal, with any ideas and information concerning programming for 2005 @ [tarajo@udel.edu](mailto:tarajo@udel.edu).

#### **D. Shaw Bronner, Nominating Committee Chair:**

We want to welcome our new PASIG Board members, Tara Jo Manal and Julie O'Connell, and bid farewell and enormous thanks to Lynn Medoff and Susan Clinton. In looking back over my interaction with the PASIG, beginning in 1996, it's reassuring to know that our members continue to contribute to the PASIG's growth and development. We support and assist each other, network, and in the process have formed lasting friendships. Thank you!

Over the coming year, we will be seeking nominations for the positions of **President**, **Treasurer**, and **Nominating Committee**. We hope each PASIG member will consider either running for an elected office or volunteering for our committees. These include Practice, Research, Public/Media Relations, Membership, and Education. The professionalism, dedication, support, and friendship found in working in the PASIG group makes the time volunteered well worth it. In the next issue of *OP*, we will publish job descriptions for each of the positions open for nomination. In addition, we'll discuss a description and goals for each of the committees.

I would like to give a warm thanks to Julie O'Connell for her service on the Nominating Committee, as she steps up to serve as PASIG Secretary. I want to welcome Karen Hamill, who is joining Gayanne Grossman and me on the Nominating Committee. Please feel free to e-mail me with any questions and submit any nominations for the above offices to: [sbronner@liu.edu](mailto:sbronner@liu.edu).

#### **E. Marshall Hagins, Practice Committee Chair:**

Marshall Hagins reported on the Description of Advanced Clinical Practice, which has been completed and is awaiting approval by the Orthopaedic Section Board. The information that can be taken from this analysis will help with items such as curriculum design for programming, continuing education courses, and residency programs in performing arts physical therapy.

Tara Jo Manal is looking at state practice acts as they come up for renewal to make sure the House of Delegates statement regarding interstate reciprocity is included for PTs working across state lines with sports teams and dance/music companies.

#### **EDUCATION COMMITTEE:**

Please refer to Vice President's report above.

#### **RESEARCH COMMITTEE:**

This group was not available to make a report at this meeting. They were involved in compiling the handouts for this year's preconference course on dance medicine. They are charged with publishing a literature review on a quarterly basis including the development of a shared database on a central web site in order to create more evidence base for our clinical practice in the performing arts.

#### **PUBLIC RELATIONS/MEDIA COMMITTEE:**

Adrienne McAuley reported this past year public relations

have been directed at increasing awareness of the PASIG among our fellow PTs and the performing arts community. **We still need committee members!** If you are interested in joining, please contact Adrienne McAuley, PT, OCS at [mcauley@painpoints.com](mailto:mcauley@painpoints.com).

The new Orthopedic Section web site has been used this past year for information sharing on conferences (outside conferences can be listed for a fee), equipment for sale, and to help inform membership of CSM programming. Some discussion occurred with regard to use of our web site to list information on related web sites that offer information such as for musical instrument/equipment modification.

If you are a PASIG member and would like your name and contact information posted under "Find a PT" please send an email directly to [tfred@orthopt.org](mailto:tfred@orthopt.org) with PASIG in the subject line. And, as a reminder, PASIG has pins, glossaries, brochures, and membership directories available for personal use and for marketing purposes. Contact Tara at 1-800-444-3982 x 203.

#### MEMBERSHIP COMMITTEE:

Susan Clinton reported that the Membership Committee spent the better part of 2003 compiling the new membership directory. This is available through the Orthopedic Section this spring, as it was not yet available for CSM 2004. The membership committee will continue to update the membership directory and make sure all information is current for communication. Please contact Susan with any new information such as name changes, address changes, and credential updates as soon as possible at [sclint@lsuhsc.edu](mailto:sclint@lsuhsc.edu).

#### NEW BUSINESS:

- 1) Strategic Planning meeting was held with the Orthopaedic Section in October to better align the Section's strategic plan with APTA's Vision 2020. It was decided that to help Orthopaedic Section members in achieving autonomous practice would be accomplished through the 3 tracks of education, practice, and research. The PASIG also will follow this line for its membership. An initial meeting was scheduled for the following evening to discuss goal setting.
- 2) Good-byes to Susan Clinton, outgoing Secretary and Lynn Medoff, outgoing Vice President. Awards from the Orthopaedic Section were given to both officers. The Executive Board also was reminded that they are encouraged to attend the Orthopaedic Section Business Meeting on Saturday morning of CSM.
- 3) Discussion was presented by Jennifer Gamboa to consider the possibility of the PASIG sponsoring a student (interested in the performing arts) to CSM.

**MOTION:** The Public Relations Committee will investigate and determine a method for the selection of a student to be sponsored by the PASIG for attending CSM 2005. The committee will present this for approval by the Executive Board. The PASIG membership will reinvestigate the process next year at CSM 2005 before continuing this act. **PASSED**

**MEETING ADJOURNED:** 7:35 PM

*Susan C. Clinton PT, MHS*  
Secretary

## GET INVOLVED IN THE PASIG AND GET AHEAD!

Join your fellow PASIG members in becoming an ambassador for the Performing Arts! The PASIG wants to encourage all our members to become actively involved by serving as committee members, regional directors, officers, and by offering your input at business meetings and through communication with other PASIG members. Remember, when you give of your time and energy to the PASIG, it's like giving a gift to yourself! The PASIG is only as strong as its members. If you have an interest in committee involvement, please contact the Committee Chairperson.

#### PASIG RESOURCES



PERFORMING ARTS SPECIAL INTEREST GROUP • APTA

*Let PASIG help you MARKET your services!*

**PASIG BROCHURES AND LOGO PINS** are available to help you advertise and build your performing arts patient base. You can use the **BROCHURES** to market yourself to the performing arts community, the medical community, and to colleagues in the physical therapy community. You may proudly wear the **PASIG Logo Pin** to increase professional exposure.

The **PASIG MEMBERSHIP DIRECTORY** is an excellent resource for referrals, especially when your patients travel out of state. It includes state-by-state and alphabetical listing of PASIG members, as well as a Student Affiliation Site List. And don't forget, we still have **DANCE / MUSIC GLOSSARIES** available to assist you and your colleagues in communication with your performing artist patients.

#### ORDER NOW!

PASIG PINS	\$5.00
PASIG DIRECTORIES	\$3.00
PASIG BROCHURES	\$15.00 (package of 25)
GLOSSARIES	\$2.00

**TO ORDER:** Call the Orthopaedic Section at  
1-800-444-3982 x 203.

**All proceeds benefit the PASIG.**

The 2004 budget is available upon request by contacting Tara Fredrickson ([tfred@orthopt.org](mailto:tfred@orthopt.org)) at the Section office.



# Pain MANAGEMENT

SPECIAL INTEREST GROUP • ORTHOPAEDIC SECTION, APTA, INC.

## PRESIDENT'S MESSAGE

*Joseph A. Kleinkort, MA, PhD, PT, CIE*

Nashville is now in the rearview mirror. The programming this year seemed better than ever! Our courses on both Laser and Functional Manual Therapy were standing room only and closed due to lack of room. All were eagerly soaking up all the information and many were interested in advanced courses. We will try to offer more programming in these areas in the future since the response was so overwhelmingly positive.

I was able to meet many students and introduce them to both the Orthopaedic Section and the Pain Management SIG, and I received numerous requests from them to come and give courses at their schools. I hope to see many of you this coming year in my travels throughout the US. If you are interested in having a short course in one of your schools, just give me a call and we will try to arrange it.

The Orthopaedic Section is getting a few PowerPoint slides together that we all can use when we give lectures throughout the US to get the word out on the Orthopaedic Section. We have such a diverse and powerful group that can benefit the clinician in many and varied ways.

On the analgesic front, a new study of 25 burn patients will be reported on in Vancouver on the 25<sup>th</sup> of March at the American Burn Association. The overall aggregate decrease in pain was 60% by treating 4%TBSA burn for 2 min with frequencies of 12 and 28 hz with a 5 mw laser at 635nm from Erchonia. The average burn size was 7.1%TBSA and the reduction of pain was from 6 to 18 hours. Dr J.W. Nelson, MD also reported visual improvement of tissue color and perfusion of the injured tissues. This will have very profound effects on the treatment of burn cases and possible reduction of narcotic requirements.

I encourage you to send me new studies that can be published in our area of pain management so that all can be up to date on the very latest that can be done in our area of helping our patients have a better quality of life.

### **Power Plates® Advanced Body Vibration™: Tapping The 'Healing Well' Within**

*Joe Kleinkort, PT, MA, PhD, CIE*

From herbal concoctions to synthetics, and ultrasound to electro-stimulus, healing professionals have long searched the limits of nature and technology to identify and develop methods or external sources for pain reduction, healing, and overall wellness and longevity. Within this incessant drive for external answers, it seems that often we overlook the most convenient, highly engineered, and natural source for solutions: the human body itself.

Whether the ability for bones to regenerate, strengthen, and heal themselves, or antibodies to fight the internal microscopic battle against the common flu, the miracle of physiological engineering that is the human body is armed with innate mechanisms of both self defense and recovery unparalleled by any external source or method. A quickly emerging technology known as 'whole body vibration' or 'Advanced Vibration Technology™' is the latest and arguably greatest example of this notion of the body's own 'self-help' capability.

Advanced Body Vibration exploits the human body's innate reflexive response to disruptions in stability, in order to stimulate enhancements in muscle strength and performance, flexibility and range of motion, release of critical fitness, wellness and longevity hormones, fat reduction, and reduction of pain, particularly lumbar back ailments and then some. Just as the leg kicks forward involuntarily when the doctor strikes our lower knee to test reflexes, the body's muscles also engage in an involuntary reflexive contraction in response to each disruption in stability. Again, the body's reaction to these disruptions is totally natural and occurs involuntarily and unconsciously at the neural level.

Los Angeles-based Power Plate North America introduced the country's first mass-distributed Advanced Body Vibration training machine, The Power Plate, in 2002, and already has made a substantial impact on the world of sports medicine and strength and conditioning. Professional teams from all 4 major sports, including the NFL's World Champion Tampa Bay Buccaneers, the NHL Stanley Cup finalist Anaheim Mighty Ducks, and Major League Baseball's Chicago Cubs among many other pro teams, currently use the Power Plate for its host of whole body vibration training benefits. As a result, the Power Plate is now gaining attention among mainstream health and fitness professionals and longevity centers across the country. But the Power Plate is not merely a fitness method for elite athletes, but also for the host of Americans young and old who want to live healthier, longer lives.

Results of a study conducted at the University of Leuven in Belgium, and published earlier this year in the official *Journal of the American College of Sports Medicine*, measured the results of subjects who strength trained using whole body vibration via the Power Plate, and compared these with that of subjects engaged in conventional resistance training. The study concluded that subjects training on the Power Plate experienced the same strength gains in no more than three 15 to 20 minute sessions per week, as did the conventional resistance training group, engaged in lengthier 60 to 90 minute sessions.<sup>1</sup>

The Power Plate resembles a large scale, featuring a 2x3-foot platform. Individuals need merely assume a 'soft squat' (standing with knees slightly bent) position on the platform, with subtle vibrations occurring 30 to 50 times per second, triggering the critical reflexive muscle contraction throughout the body. Each set performed on the Power Plate is no longer than 30, 45, or 60 seconds in length, and training sessions on the machine need to be performed no more than 3 to 4 times a week with each session lasting a maximum of 10 minutes of actual time on the plate.

In addition to providing a proven fitness and longevity method to fitness enthusiasts and elite athletes, the Power Plates Advanced Vibration Technology allows individuals with debilitating conditions such as arthritis, multiple sclerosis, Parkinson disease, and stroke victims to enjoy the benefits of exercise working within their personal limitations. Published research studies conducted at the State University of New York at Stony Brook and the Laboratory for the Research of the Musculoskeletal System at KAT Hospital in Athens, Greece, also have shown that whole body vibration training may provide the only method of actually counteracting the degeneration of bone density without the aid of pharmacology, thus providing the ultimate weapon against osteoporosis which affects millions of Americans each year.<sup>2</sup>

Another recent study found that using whole body vibration therapy increased growth hormone levels by 361%, a drastic improvement which may slow the effects of aging.<sup>3</sup>

Whole body vibration may be a new concept to most Americans; however, it was developed by Russian Olympic trainers looking to maintain a competitive edge during the 1970s when the Russians were dominating Olympic play. Success with athletes led to research by the Russian space program, yielding compelling data supporting the technology's ability to combat the degenerative effects of zero gravity conditions on muscle and bone tissue (NASA is conducting similar research with the Power Plate). A host of European research, published here in the United States is currently available supporting the various claims of body vibration training.

The Power Plate with its revolutionary Advanced Vibration Technology is offering a solution that will not only improve the quality of life day-to-day, but ultimately add precious years as well.

It's important to note that there are several groups or conditions for which training on The Power Plate is not recommended including individuals with pacemakers, immediately following surgical procedures or during pregnancy.

For more information on whole body vibration training technology and the Power Plate, contact Power Plate North America toll free at 1(877)-87PLATE or visit [www.powerplate-usa.com](http://www.powerplate-usa.com).

## REFERENCES

1. Delecluse C, Roelants M, Verschueren S. Strength increase after whole body vibration compared with resistance training. *Med Sci Sports Exerc.* 2003;35(6).
2. Flieger J, Karachalios Th, Khaldi L, Raptou P, Lyritis G. *Mechanical Stimulation in the Form of Vibration Prevents Postmenopausal Bone Loss in Ovariectomized Rats. Calcified Tissue International.* New York, NY: Springer-Verlag; 1998:63:510-514.
3. Judex S, Donahue L-R, Rubin, C. Genetic predisposition

to low bone mass is paralleled by an enhanced sensitivity to signals anabolic to the skeleton. *The FASEB Journal.* June 21, 2002.

4. Bosco C, Iacovelli M, Tsarpela O, et al. Hormonal responses to whole body vibration in men. *Eur J Appl Physiol.* 2000;81:449-454.

## PAIN MANAGEMENT SPECIAL INTEREST GROUP BOARD LISTING

### PRESIDENT

Joseph A. Kleinkort, PT, MA, PhD, CIE  
303 Inverness  
Trophy Club, Texas 76262-8724  
PH: 817-491-2339 • FX: 972-887-0294  
[indusrehab@aol.com](mailto:indusrehab@aol.com)

### VICE PRESIDENT

John E. Garziona, PT, AAPM  
PO Box 451  
Sherburne, NY 13460-0451  
PH: 607-334-6273 • FX: 607-334-8770  
[jgarziona@juno.com](mailto:jgarziona@juno.com)

### TREASURER

Scott Van Epps, PT, PCS  
45 Wapping Ave  
South Windsor, CT 06074-1345  
PH: 860-545-8600 • FX: 860-545-8605  
[svanepps@cox.net](mailto:svanepps@cox.net)

### SECRETARY

Elaine Pomerantz, PT  
20 Brookwood Road  
South Orange, NJ 07079  
PH: 973-575-1112 • FX: 973-575-1369  
[smokeyman@aol.com](mailto:smokeyman@aol.com)

# Animal Physical Therapist

## SPECIAL INTEREST GROUP

### Orthopaedic Section, APTA, Inc.



#### ANIMAL PHYSICAL THERAPIST SPECIAL INTEREST GROUP DIRECTORY OF OFFICERS & CHAIRPERSONS

##### President

Deborah Gross Saunders, MSPT, OCS, CCRP™  
PO Box 287  
Colchester, CT 06415  
Phone: 860-227-7863  
Fax: 860-537-8703  
E-mail: wizofpaws@aol.com

##### Vice President and International Liaison

Steve Strunk, PT  
11115 Gambrell Park Road  
Frederick, MD 21702  
Phone: 301-424-9194  
301-293-3262  
Fax: 301-962-7782  
E-mail: stevestpt@earthlink.net

##### Treasurer

Sandy Brown, MSPT, CCRP™  
1624 Prestwick Dr.  
Lawrence, KS 66047  
Phone and Fax: 785-749-9254  
Email: sandyb@sunflower.com

##### Secretary

Becky Newton, MSPT  
1710 SW 23<sup>rd</sup> Court  
Cape Coral, FL 33991  
Phone/Fax: 239-283-1824  
E-mail: jbeckyn@yahoo.com

##### Committee on Practice

Caroline Adamson, PTMS, CCRP™  
Colorado Canine Sports Medicine/  
Rehabilitation Clinic  
Alameda East Veterinary Hospital  
9870 E. Alameda Avenue  
Denver, CO 80231  
Work: 303-366-2639  
FAX: 303-344-8150  
E-mail: cadamson@juno.com

##### Chair of Education

Ginamarie Epifano, PT  
The Animal Rehabilitation and Fitness Center  
918 Houndslake Dr.  
Aiken, SC 29803  
Phone: 803-649-4965  
Fax: 803-649-3949  
Email: k9rehabcenter@aol.com

##### Newsletter Coordinator

Becky Newton, MSPT  
1710 SW 25<sup>rd</sup> Court  
Cape Coral, FL 33991  
Phone: 239-283-1824  
Fax: 239-283-1824  
Email: jbeckyn@yahoo.com

##### State Liaison Coordinator

Charles S. Evans, MPT, CCRP  
26 Lamprey Lane  
Lee, NH 03824-6552  
Phone: (603) 659-1893  
Work: (603) 749-6686  
E-mail: chazzevans@netscape.net

##### Nominations Committee

Amie Lamoreaux-Hesbach, MSPT, CCRP™  
Mid-Atlantic Animal Specialty Hospital  
4135 Old Town Road Suite B  
PO Box 1168  
Huntingtown MD 20639-1168  
Phone: 410-414-8250  
Email: amiept@yahoo.com

##### PTA Representative

Angela D. Frye-Lewelling, PTA  
235 Douglas Dam Road  
Kodak, Tennessee 37764  
Work in human practice: (865) 429-6584  
Work in animal practice: (865) 974-2993  
E-mail: K9LPTA@aol.com

##### Orthopaedic Section Board Liaison

Gary Smith, PT, PhD

##### SIG Coordinator and Off-Site

Continuing Education Coordinator  
Jessica Hemenway

3. The APTA has a web site that lists all of the State Practice Acts: [www.apta.org/advocacy/state/state-practice](http://www.apta.org/advocacy/state/state-practice).

#### FROM THE PRESIDENT

*Deborah Gross Saunders, MSPT, OCS, CCRP*

Hello everyone. I am happy to report successful and wonderful programming at the recent Combined Sections Meeting in Nashville. The 3 presentations were well attended and received and our Business Meeting was successful in planning. Minutes from the business meeting are included.

I extend our congratulations to our new officers, Steve Strunk as Vice President and Charlie Evans as State Liaison Coordinator. Gina Epifano is the Education Chair. Of course, with new officers, we need to say good bye to other officers. David Levine has dedicated a significant amount of time and energy to the SIG since its conception, and our gratitude is significant. Siri Hamilton also has dedicated a great deal through her coordination of the state liaisons. Kristin Heinrichs is no longer in the position of Education Chair and will be sorely missed.

- Charlie Evans is in the process of updating the present state liaison list and reconfirming commitments for these individual positions. If you are currently a state liaison, please contact him. And if you would like to become a state liaison, also contact him. We still need liaisons for states, and one of our goals is to obtain liaisons in each state.
- We are looking for articles/case studies for our upcoming newsletter. If you have any ideas, please contact Becky Newton. The next deadline is June 11, 2004.
- Amie Hesbach is in the process of filling the committees. If you are interested, please contact her.
- If you are interested in becoming a mentor for a physical therapist interested in animal rehabilitation or a physical therapy student, please contact me.

Are you interested in placing your name and facility on the SIG web site? If so, please e-mail the information to Debbie Saunders at [wizofpaws@aol.com](mailto:wizofpaws@aol.com). We will be compiling a list of facilities in the United States providing rehabilitation to animals on our web site as a service to other physical therapists and clinicians, veterinarians, and clients.

This year's programming at CSM was very successful and very well attended. Steve Adair, DVM, MS from the University of Tennessee's Veterinary School began the programming on the topic of Equine Physical Therapy. Dr. Adair's talk covered common injuries and ailments seen in the horse as well as common treatments. Some of the common ailments and injuries discussed are inclusive of wounds, fractures, neurological injuries to the peripheral joints, and

#### CALENDAR OF EVENTS

- The home study course BASIC SCIENCE FOR ANIMAL PHYSICAL THERAPISTS is still available. Contact 800-444-3982 x 216 or 608-788-3982 x 216 for more information.

#### THE ANIMAL PHYSICAL THERAPIST SPECIAL INTEREST GROUP (ANIMAL SIG) UPDATE:

1. Orthopaedic Section member and nonmember directories are available through the Section Office 800-444-3982 x 203 Fax: 608-788-3965 or E-mail: [tfred@orthopt.org](mailto:tfred@orthopt.org). There currently are 544 members.
2. State Liaisons: To date there are 33 states that have Animal SIG Liaisons. Contact Charles Evans at [chazzevans@netscape.net](mailto:chazzevans@netscape.net) for more information.

spine, angular limb deformities, navicular injuries, and problems of the horse's feet. Various treatments discussed included ultrasound, electrical stimulation, laser therapy, manual therapy, pulsed shock wave therapy, ice, heat, and pharmaceutical interventions.

Deborah Gross Saunders, MSPT, OCS, CCRP spoke on the physical evaluation and management of spinal conditions in dogs. The anatomy of the spinal cord and vertebral column were discussed as well as the approach to the physical evaluation of the neurological patient. The evaluation includes the mental examination, a gait evaluation, active and passive range of motion, and specific neurologic testing of the spinal and postural reflexes. Common conditions and treatments discussed included intervertebral disc disease, degenerative myelopathy, fibrocartilaginous emboli, fractures and tumors. Specific treatments included modalities, low level laser, balance and proprioceptive exercises, strengthening exercise, aquatic therapy, and manual therapy.

Brad Jackson, PT, MS from the Marquette General Health Care System in Marquette, WI discussed the integration of the human-animal bond to improve patient outcomes. Involving animals in the health care field to improve human health is being more common and Mr. Jackson discussed aspects of this alliance. Animal assisted activity and animal assisted therapy was discussed. Animal assisted activity provides opportunities to improve the quality of life and is performed in an approved setting by animals that meet a certain standard. Animal assisted therapy is goal directed and actually involves the animal in the treatment process. Evidence of the benefits of this program was discussed in great detail, sighting recent research to substantiate the programs.

Notes from the lectures are available on the Orthopaedic Section web site.

### **Animal Physical Therapist Special Interest Group**

**APTA CSM 2004 Nashville, Tennessee**

**February 7, 2004**

#### **Programming**

Equine Physical Therapy and Rehabilitation: An Overview (Steve Adair, DVM), Spinal Conditions in Dogs: Evaluation and Treatment (Deborah Gross Saunders, PT, MSPT, OCS), and Integration of the Human-Animal Bond to Improve Patient Outcomes (Brad Jackson, PT)

#### **Relevant Poster Presentations**

The Effects of Small Dogs on Vital Signs in Elderly Women: A Pilot Study. Jane E. Luptak, PT, MPT, Nancy A. Nuzzo, PT, PhD

A Comparison of Canine Range of Motion Measurements Between Two Breeds of Disparate Body Type. Samantha Lakey, SPT, Matthew Smith, SPT, Cindy Benson, MPT, OCS, Kathie Hummel-Berry, PT, PhD

#### **Business Meeting**

Members in attendance: Debbie Gross Saunders (President), Steve Strunk (Vice President), Amie Lamoreaux Hesbach (Nominating Committee Chairperson), Kristal Gade, Marjorie Rodd, Brad Jackson, Emily Slaver, Joanna Wallingford, Laura Rose, Janet Drake, Ann Williams, Carol Huegel, Kadi Workman, Cheryl Riegger-Krugh

1. Welcome to new officers
  - a. Vice-President: Steve Strunk  
stevestpt@earthlink.net
  - b. Liaison Coordinator: Charlie Evans  
chazzevans@netscape.net
  - c. Education Chair: Gina Epifano  
ginamarie2@msn.com
2. Thank you to outgoing officers
  - a. David Levine
  - b. Siri Hamilton
  - c. Kristin Heinrichs
  - d. Cheryl Riegger-Krugh
3. State liaison update
  - a. Debbie reports that Charlie will be updating the state liaison list. There continue to be states without liaisons. If you are interested in serving as a state liaison, please contact Charlie. Charlie and Debbie also ask that state liaisons contact Charlie on a regular (monthly) basis.
  - b. Each state liaison serves as a contact person for SIG members from his/her state. We ask that liaisons investigate his/her state's physical therapy and veterinary medicine practice acts.
  - c. We hope that through the state liaison network, we might be able to learn from each other's experiences and successes in individual conversations/negotiations with state boards (PT and vet) and organizations (APTA and AVMA).
4. Newsletter update
  - a. Debbie reports that Becky needs articles for the newsletter next week. Submissions may be forwarded to jbeckyn@yahoo.com.
  - b. Due dates for submission for this year are: February 14, June 11, and September 27.
  - c. Cheryl suggested that our presenters today at CSM APT-SIG programming submit summaries of their presentations for inclusion in the newsletter.
  - d. Brad suggests that we contact DogWatch from Cornell University. He believes that they will allow duplication of articles from their newsletter periodically by nonprofit organizations.
5. Education committee update
  - a. CSM 2005
    - i. Debbie reports that Gina will plan programming for CSM 2005.
    - ii. Debbie asked attending members of their interest in a preconference course for CSM which will be investigated.
    - iii. Suggestions for future programming (whether preconference or intraconference) included: hippotherapy (with possible involvement of the American Hippotherapy Association (AHA) and cosponsored by the pediatric and/or neurological sections), human-animal bond and animal assisted therapy (with possible involvement of the Delta Society and cosponsored by the pediatric and/or neurological sections).
    - iv. It was agreed that a survey of all members would be included in a future newsletter.
  - b. Independent study courses
    - i. Debbie will speak with the Orthopaedic Section Independent Study Course Editor concerning the



- possibility of future independent study courses with an animal physical therapy focus.
- ii. Suggestions for future independent study courses included: canine and equine physical therapy treatments, common orthopaedic conditions in animals, behavior and restraint, the application of modalities to animal patients, veterinary pharmacology, and feline anatomy and physiology.
  - iii. Amie will attempt to contact a member who had initiated the feline anatomy and physiology independent study course in the past.
- c. Web site update
- i. Debbie admitted that the SIG web site is out of date. She will contact Tara at the Section office concerning updates.
  - ii. Cheryl stated that the SIG member welcome packet, which includes information about getting started in animal rehab and what should be considered prior to opening a practice, should be posted to the web site.
  - iii. Debbie also announced plans for the web site to include a listing of practicing PT/PTAs with contact information, residency and clinical information (ie, how many students/observers can a clinic handle, what qualifications are necessary, when could a clinic take students/observers, etc), and a mentoring program.
  - iv. Brad suggested that the web site include links and information on the human-animal bond and hippotherapy.
  - v. Inquiries were made of establishing a listserv electronic bulletin board for SIG members. Members were interested. Members will be surveyed concerning this in the near future.
- d. The updated (as of 2003) APT-SIG mission statement was reviewed.
- i. The Animal Physical Therapy Special Interest Group's scope and mission includes: (1) the prevention of and intervention for injuries in animals, and (2) the prevention of and intervention for humans with musculoskeletal disorders that are related to working with animals, such as athletic and working and assistance animals.
  - ii. The group suggested that the mission statement be altered to include neuromusculoskeletal disorders (rather than musculoskeletal disorders). This would follow with mission of the AHA.
- e. The Third International Symposium on Rehabilitation and Physical Therapy in Veterinary Medicine will be August 7-11 at North Carolina State University, Raleigh/Durham, North Carolina. <http://www.cvm.ncsu.edu:8110/conted/rehabsymposium/> Debbie mentioned possible plans for the APT-SIG to sponsor a breakfast roundtable meeting with representatives of the AVMA during the Symposium. Additionally, a call for papers recently was released. The Symposium will include platform presentations, but will not allow poster presentations (per David Levine per NCSU regulations).
- f. Discussion occurred concerning dual credentialing of physical therapists and assistants.
- i. Three options were discussed.
    1. An online veterinary technician program for physical therapists.
    2. A transitional DPT program for physical therapists.
    3. An advanced masters degree program for physical therapists.
  - ii. Debbie has and will continue to discuss this possibility with universities which currently offer either veterinary technician or tDPT programs. She continues to pursue feedback from APT-SIG members.
  - iii. Steve mentioned the University of Tennessee has continued the canine rehabilitation program. Plans are for an equine rehabilitation program by a consortium of veterinary schools in the future. Steve cited an article in *OPTP* which discussed dual credentialing. This can be found in *OPTP* 2001, Volume 13, Number 2.
6. Liability insurance update
- a. Debbie announced that the current liability insurance carrier in Salt Lake City is no longer insuring physical therapists who practice animal rehabilitation.
  - b. Debbie suggested that an insurance subcommittee of the Practice Committee should be formed to pursue other options for insurance.
  - c. Cheryl suggested that the SIG contact Stephanie Fagan and/or Lynn McGonagle concerning this issue.
  - d. A member stated that the IAAMB offers malpractice insurance for animal massage therapists. APT-SIG members may wish to contact this organization for further information. International Association of Animal Massage and Bodywork, P.O. Box 118099, Toledo, OH 43611, 800-903-9350, [www.iaamb.org](http://www.iaamb.org)
7. Steve suggested that the SIG establish a research agenda to examine literature (perform a meta-analysis) in the basic science of physical therapy which utilizes animals as subjects. He further suggests that the SIG compile a list of literature on the web site. By documenting the science that already exists in animal physical therapy, we might further establish confidence in physical therapy treatment of animals.
8. Amie made a call for committee members and volunteers. An e-mail will be sent to all attending members and a survey of members not in attendance will also occur.
9. Motion 1: That the APT-SIG pursue strategic planning to update the SIG mission, vision, and goals to correlate with the updated Orthopaedic Section mission, vision, and goals and to include human-animal bond and animal assisted therapy/activity, including hippotherapy, working animals and their handlers, and assistance animals and their handlers. Motion made by Amie Lamoreaux Hesbach and seconded by Kadi Workman.

### **Third International Symposium on Rehabilitation and Physical Therapy in Veterinary Medicine**

Research Triangle Park, North Carolina - August 7-11, 2004  
 The Third International Symposium on Rehabilitation and Physical Therapy in Veterinary Medicine Symposium will be hosted by North Carolina State University in August 2004.  
 The field of animal rehabilitation is now rapidly growing

and a number veterinary practices and teaching hospitals now include rehabilitation services. Nationwide and beyond, many veterinarians are actively collaborating with physical therapists to design treatment programs and deliver therapy. Rehabilitation is becoming part of the recovery of many patients after trauma or surgery.

This Symposium will give all professionals involved or interested in animal rehabilitation the opportunity to hear the most current scientific and clinical information on this exciting field. Lectures will be presented by researchers and clinicians. Focused discussions will take place in daily breakfast discussions. Laboratory and demonstration sessions will cover many clinical aspects of animal rehabilitation.

### CONFERENCE OBJECTIVES

The objectives of the Third International Symposium on Rehabilitation and Physical therapy in Veterinary Medicine include:

- learning from clinicians in the field how physical therapy modalities and therapeutic exercises are used in animals,
- learning how rehabilitation services for animals are organized and delivered,
- learning specific rehabilitation protocols for the common orthopedic and neurologic problems seen in dogs and horses, and
- understanding the current state of the profession in the United States and internationally.

### CONFERENCE HIGHLIGHTS

In depth discussions of the following information will be included:

#### Canine rehabilitation

- Rehabilitation after stabilization of cruciate ligament injuries
- Management of osteoarthritis and chronic pain
- The rehabilitation of acute and chronic spinal cord injuries

#### Equine rehabilitation

- The management of acute and chronic joint pain
- The rehabilitation of tendon and ligament problems
- The management of neurologic diseases

For more information, to be added to the mailing list, or to submit an abstract, please visit:

<http://www.cvm.ncsu.edu/conted/rehabsymposium/>