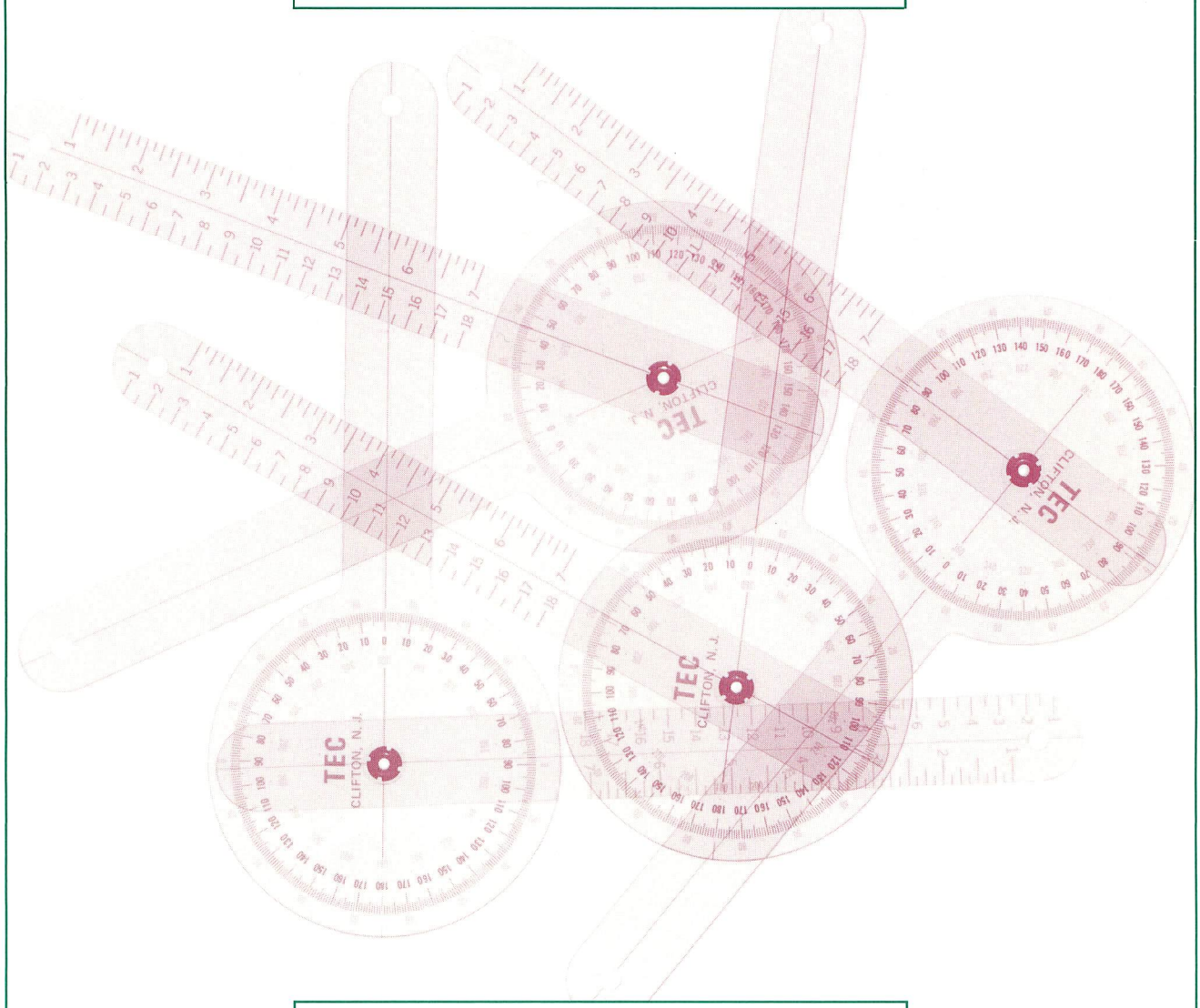
ORTHOPAEDIC Physical Therapy PRACTICE

Vol. I No. 2, 1989



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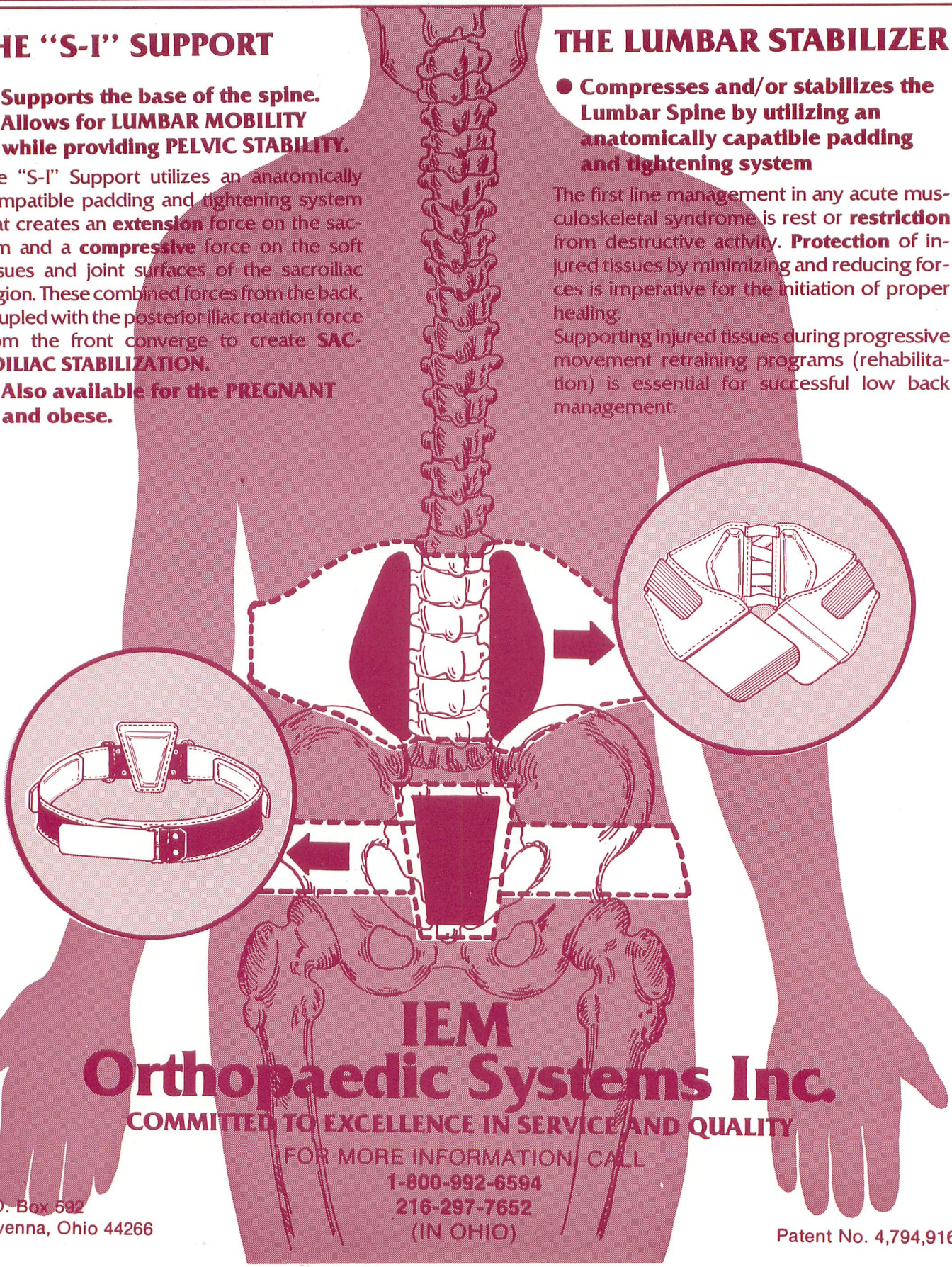

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August 7-13, 1989 **Chicago, Illinois (Evanston)**
Omni Orrington Hotel

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THE CERVICAL SPINE
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THE SHOULDER
Sandy Burkart, P.T., Ph.D.

UPPER EXTREMITY
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The purpose of the "Review for Advanced Orthopaedic Competencies" is to provide Orthopaedic Section members and non-members with a process for review. (It is not intended to satisfy examination criteria for the Orthopaedic Physical Therapy Specialty Competency examination, but to serve as a review process only.) Cancellations received in writing prior to the course date will be refunded in full minus a 20% administration fee. Absolutely **no** refunds will be given after the start of the course.

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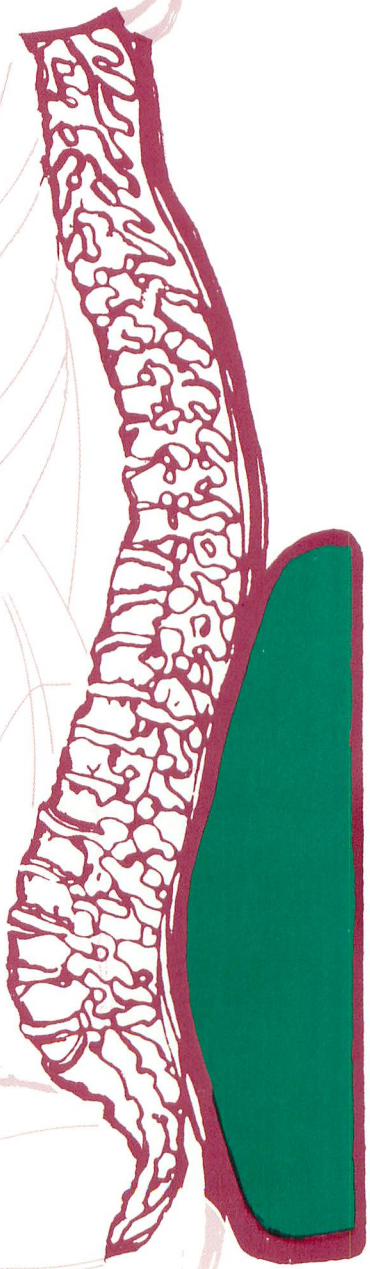

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TABLE OF CONTENTS

FEATURES

HIGHLIGHTS

UPDATES

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EDITOR'S VIEWPOINT

I have received several letters indicating a favorable response to this new publication since the last issue of Orthopaedic Practice. It seems that a more clinically oriented publication has been needed for some time.

The present issue contains two feature articles. The first is an article by Kent Timm describing his private practice. I would like to see this sort of article in each of our issues and encourage anyone who feels they have a unique practice situation to submit a similar description of their practice. Perhaps your practice has a unique patient record keeping system that you would like to write about. Anything that you feel could be of interest and/or help to other orthopaedic physical therapists would be welcomed. Putting together a publication of this sort becomes a tremendous task without member input. Please send us material from you own experience and ideas for particular improvements.

Our second feature article by Robert Engle is on evaluation of the shoulder complex. This gives a good model for the type of clinical article that I would like to print in each issue.

If you feel that you have some unique exercises for special cases or feel strongly about the use of a particular modality, write it up and we will print it in another new column you'll find under Highlights called Strategy. This issue features an article by Jim Gould called COOL IT! The minutes of the Orthopaedic Section business meeting at the Combined Sections Meeting are also included under Highlights.

Please note Garvice Nicholson's commentary about diagnosis that you'll find in our Updates section. I feel he addresses a very important issue in the field of physical therapy—one that we are probably all aware of but perhaps have not thought enough about or acted on.

We will also feature a contest in the next issue called The Art of Physical Therapy in which you can submit photographs, watercolors, collage, and prints for us within the magazine. We ask for 8″ × 10″ or larger works and will publish the winning entries.

Lastly, I would like to recognize two very important people that add a tremendous amount of "style" to this publication. Roger Grant is a photography professor at the University of Wisconsin in La Crosse and is responsible for the cover photographs and will be working with Jim Gould and myself on other photographs for feature articles. Jim Gould is well known to the Orthopaedic Section and is the art director for this publication. He has an endless supply of creative ideas and enthusiasm that is much appreciated.

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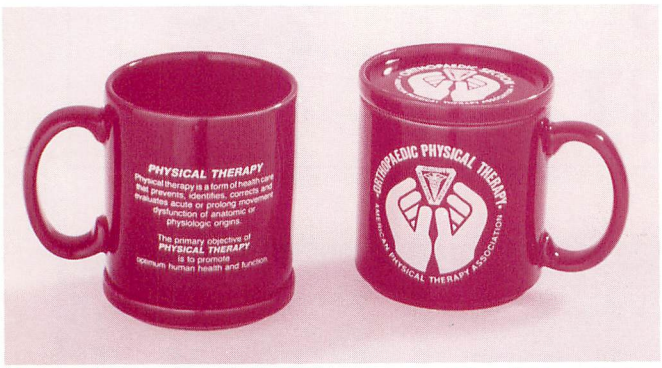

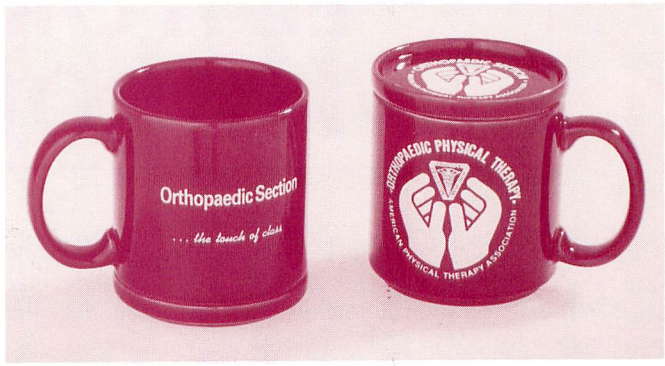

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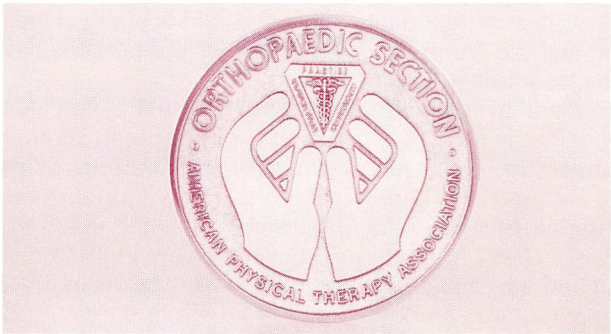

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PRESIDENT'S MESSAGE

Jan K. Richardson, P.T., Ph.D., President

1939 - 1989

If all of us were to think about Dr. Steven J. Rose, we would think of him in many different ways.

To some, he was a mentor, to others he was a scientist, to others a staunch supporter and friend, and yet to others he was a formidable adversary. But, to all of us, he was a role model and our colleague.

Steve was the perfect blend of all the elements of our profession, researcher, educator and clinician.

He served as a beacon for all of us in the profession and for those to come.

A beacon which was lit by the boldest and most sincere of hearts. A heart which was driven by an unfailing commitment to the profession of Physical Therapy.

It is for these loving, nurturing and cherished characteristics that all of us will remember Steve. We will miss you beloved friend, but we will not forget you.

The family wishes that memorials be contributed to the Steven J. Rose Endowment - The Foundation for Physical Therapy, 1111 N. Fairfax, Alexandria, VA 22314.

With Fondest Memories,
Jan K. Richardson, P.T.,Ph.D.
President

And the Executive Committee
Duane Williams
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FOR

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The article must be published in a reputable, refereed scientific journal between September 1, 1988 and August 31, 1989 to be considered for the 1990 award. Should the journal containing an otherwise eligible article experience a delay in releasing its August, 1989 issue, the article must be available to the general public no later than September 15, 1989 to be considered.

II) SELECTION CRITERIA

The article must have a significant impact (immediate or potential) upon the clinical practice of orthopaedic physical therapy. The article must be a report of research but may deal with basic science, applied science or clinical research. Clinical case studies or reviews of the literature will not be considered.

III) THE AWARD

The award will consist of a plaque and $500.00 cash to presented at the 1990 Combined Sections Meeting.

IV) NOMINATIONS

Written nominations should include the complete title, names of authors and the journal citation (title of journal, year, volume number, page numbers) of the research article. The name, address and telephone number of the person nominating the research article should also be included.

Nominations (including self-nominations) will be accepted until close of business September 4, 1989 and should be mailed to:

Research Committee of the Orthopaedic Section
A. Joseph Threlkeld, P.T., Ph.D., Chairman
c/o Division of Physical Therapy
UK Medical Center Annex 1, Room 4
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FROM THE SECTION OFFICE

The Combined Sections Meeting (CSM) was recently held in Hawaii. Besides the beautiful setting of this meeting at the Hilton Hawaiian Village, the meetings were extremely expeditious. We finished ahead of the allotted time. I would like to think the reason is that we are better organized, and not just because programming was scheduled to end by 1:30 pm each day for those attending to enjoy the surroundings. Many members brought either their spouses or significant others and stayed on after the meetings were over. The weather cooperated with the exception of one extremely rainy day.

The Orthopaedic Specialty Council (OSC) met in Philadelphia, just prior to CSM in Hawaii, with the new APTA testing service Assessment Systems, Inc. (ASI). The Council members, Joe McCulloch, Susan Stralka and Rick Ritter were assisted by Helen Price and Nancy White. The purpose of this meeting was to take the items generated during the item writer workshops held last year, and formulate the specialization exam. This group was able to develop three different exams during the course of this meeting, which means that we will not need to hold additional item writer workshops for several years.

The OSC will be meeting again in April to evaluate the completed applications of persons who wish to take the first exam, June 10, 1989. These are the persons who met the January 1, 1989 deadline for application. Notification letters are to be sent to those applicants by April 30, 1989.

The next scheduled exam date is January 31, 1990 in New Orleans, with an application deadline of September 1, 1989. Those who have gone through the lengthy application process have reported that it takes 30-40 hours of work to complete. There are documentation requirements and surveys which are part of the application, so I strongly urge you to begin the process as soon as possible. Please feel free to contact Joe McCulloch, Patti Cox (at the ABPTS office in APTA headquarters) or me with any questions you may have.

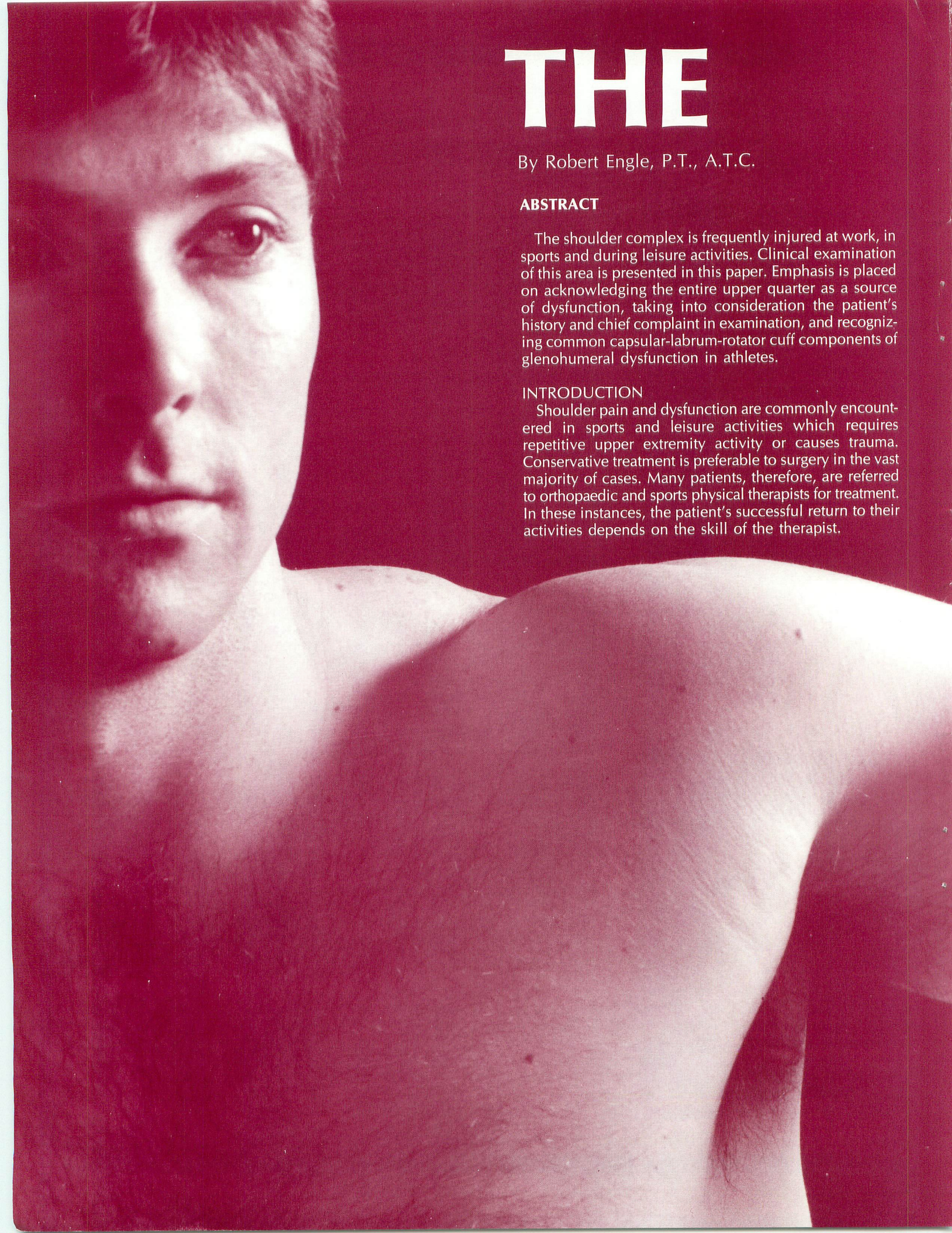
We were extremely pleased with the number of participants for the recently held "Review for Advanced Orthopaedic Physical Therapy Competencies" in Phoenix, Arizona, February 20-25, 1989. There were 133 registrations! The course had afforded other benefits besides the opportunity to hear some excellent faculty. Among these, as commented upon by the participants, were: "This Section should be commended on conducting this course. It also proved to be a wonderful opportunity to meet and talk with seasoned clinicians" and "I was pleased to get to know our Section President [Jan Richardson] and the Administrative Director [David Thomack]."

The next opportunity for the course will be August 7-13, 1989 at the Omni Orrington Hotel in Evanston, Illinois. Another February (1990) course has been discussed. The likely location will be Steamboat Springs, Colorado.

APTA has combined the strategic planning and leadership training workshops into one. This is now titled the "1st Component Leadership Seminar." It will be held April 2-4, 1989 at the Old Colony Inn near APTA headquarters. The entire Executive Committee will be attending this workshop. Subject areas from which the registrants may choose are: assertiveness training, parliamentary procedure, strategic planning, influencing public opinion through the media, time management, and fund raising. These workshops have proven to be beneficial in the past, so I am looking forward to the new format and subject areas.

It is nearly voting time again. This issue contains the candidate profiles and statements. You will be voting on the office of President, Vice-President and for a member of the Nominating Committee. You will note that Jan Richardson is running unopposed in this election. The person initially slated to run against her retracted the consent to run because of completing a doctoral program at this time. This retraction occurred just before CSM in Hawaii, and since then Nominating Committee Chair David Apts and his committee members have worked very hard to complete the slate. A call for nominations from the floor was conducted at the Section Business Meeting in Hawaii without any being received. The slate was then voted on by those attending the business meeting, and is as follows: Office of President: Jan Richardson (running unopposed); Office of Vice-President: Duane Williams (incumbent) and Joseph Vierzbicki; Nominating Committee member: Helen Price, Rosalyn Sofer, Floyd Watson, Jeff Ellis and Scott Hasson. Please watch for your mail ballot and return it as soon as possible to insure that your vote for the above individuals is counted.

Once again I would like to remind you to make sure we are kept informed of any changes of address which you may have.



THE

By Robert Engle, P.T., A.T.C.

ABSTRACT

The shoulder complex is frequently injured at work, in sports and during leisure activities. Clinical examination of this area is presented in this paper. Emphasis is placed on acknowledging the entire upper quarter as a source of dysfunction, taking into consideration the patient's history and chief complaint in examination, and recognizing common capsular-labrum-rotator cuff components of glenohumeral dysfunction in athletes.

INTRODUCTION

Shoulder pain and dysfunction are commonly encountered in sports and leisure activities which requires repetitive upper extremity activity or causes trauma. Conservative treatment is preferable to surgery in the vast majority of cases. Many patients, therefore, are referred to orthopaedic and sports physical therapists for treatment. In these instances, the patient's successful return to their activities depends on the skill of the therapist.

SHOULDER

Treatment must be based on a sound diagnostic foundation, which can be a collaborative effort between the therapist and the physician. The author will present the subjective and objective aspects of clinical examination that form the basis of diagnosis. These include the patient's history and physical examination. Examination techniques will be presented for the entire upper quarter and shoulder complex. Observation/inspection, passive/active movement, resisted testing, stability and mobility testing, palpation and upper quarter examination are discussed.

SUBJECTIVE EVALUATION

Evaluation of the patient begins with the subjective evaluation. An important first step is to establish the patient's chief complaint. Usually the chief complaint is the presence of pain in the shoulder region. Other common complaints are weakness, restricted range of motion, stiffness and clicking. Although many patients are referred to physical therapists with a diagnosis from a physician, an evaluation of each patient is still necessary to establish a base from which progress may be measured.

The onset of the patient's symptoms should be noted when taking the history. It is important to try to recreate the pathomechanics of the injury and any subsequent re-injuries. What was the position of various components of the upper quarter? In which directions were forces applied? What symptoms resulted and where? How did these symptoms change with time from onset to your evaluation?

Repetitive microtrauma represents the pathomechanics of injury for a great many athletes, such as swimmers or throwers. Their pain results from over stress to specific tissues. For these patients, a review of their sport and its mechanics, as well as their training programs, will be necessary.

It is also necessary to document the location of the patient's pain. For patients presenting with shoulder problems this can be highly variable and can change frequently. Often pain is present at several locations in the upper quarter. Cervical spine or TMJ dysfunction can refer pain in the area of the shoulder or distally in the upper extremity. Ruling out or identifying these problems is vital.

A description of pain can be distinct in

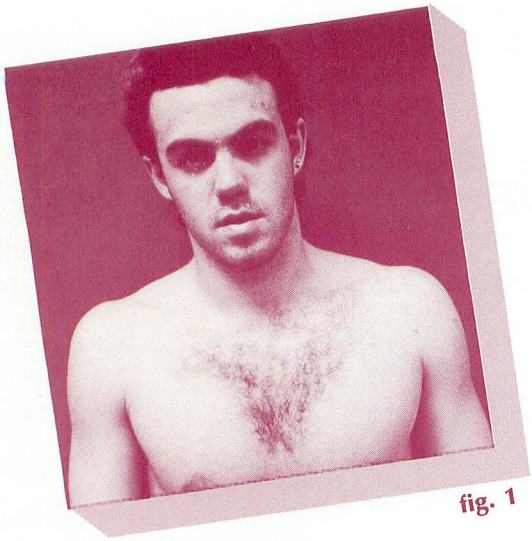


fig. 1

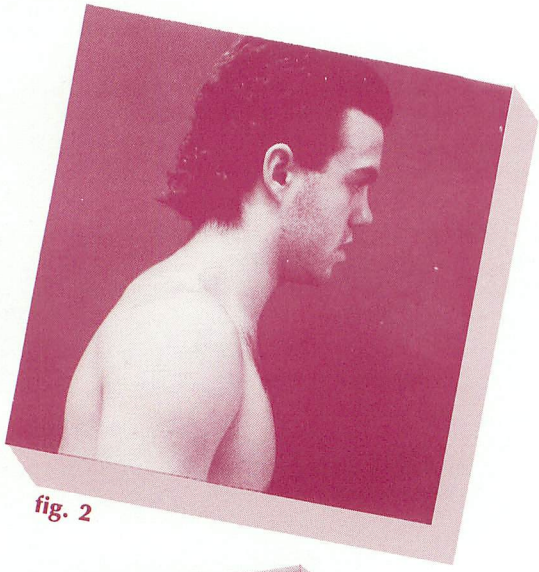


fig. 2

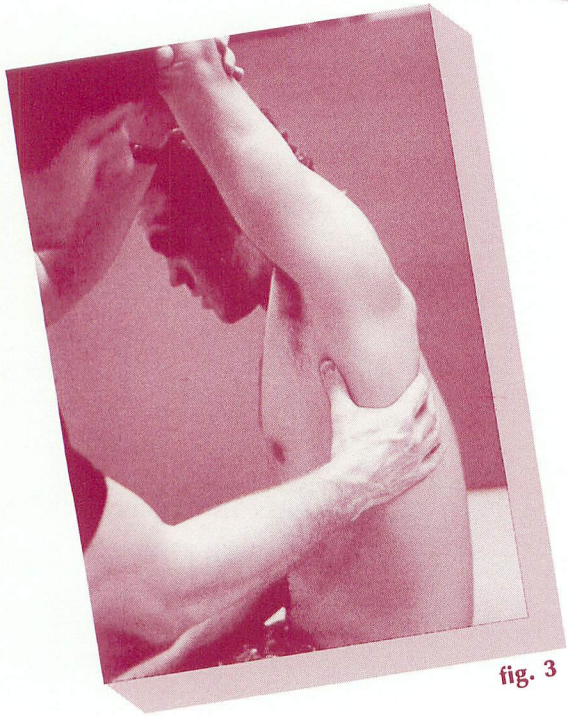


fig. 3

1. *Patient in a relaxed sitting posture with the head resting in right sidebending.*
2. *Forward head posture.*
3. *Restricted glenohumeral flexion.*

some cases. Patients will often characterize their pain as dull, sharp, aching, burning, etc. Behavior of symptoms change with specific positions or movements. Subluxations, rotator cuff impingement and glenoid labrum tears, all common shoulder sports injuries, usually create symptoms with easy reproducibility.

What specifically aggravates and relieves the patient's symptoms should be determined. A thrower may only reproduce higher symptoms with, for example, the beginning of acceleration in throwing. Impingement syndromes will aggravate the thrower's symptoms by moving into the offending range of motion, and relieve symptoms by avoiding that same range.

It is important to review any post-injury treatment the patient has received. Periods of immobilization and trials of anti-inflammatory medication are common. The results of diagnostic tests (such as arthrography, arthroscopy, electromyography (EMG), magnetic resonance imaging (MRI), computerized axial tomography (CT) and bone scans) need to be obtained. Surgical procedures must be outlined and any post-operative treatment recorded.

The patient's medical history is taken in order to pinpoint contributory components to the patient's shoulder disability. Contraindications to specific aspects of treatment for medical reasons can be determined. Ascertaining the patient's future demands in sports and/or work will help determine treatment goals and prognosis.

The subjective examination of the shoulder should therefore include the patient's diagnosis (if applicable) and history, including pathomechanics of the injury or onset, as well as the location and nature of the pain. The behavior of the symptoms are important to note, and the results of any diagnostic tests and/or treatment including surgery or immobilization, must be known in detail. Contributory medical problems and future functional demands should be considered. After gathering the subjective information, the physical evaluation of the patient's shoulder and related upper quarter is done.

SHOULDER EXAMINATION PROCESS

Observation/Inspection

The examination process for a painful shoulder should begin with a thorough inspection and observation of the entire upper quarter. Note the orientation of the head in relation to the trunk and shoulder. Often patients are actually sidebent slightly to the left or right (Figure 1). Head forward posture can also be seen in a high percentage of patients presenting with shoulder problems (Figure 2).

This head forward postural relationship results in elevated scapulaes and anteriorly rotated clavicles, which cause sternum depression and decreased shoulder flexion.(2,19) Observe the position of the humeral head as well. The humeral head can be slightly inferior from the normal resting position with inferior instability and superiorly positioned with restricted capsular mobility secondary to adhesive capsulitis.

Inspect the acromioclavicular and sternoclavicular joints for displacement or asymmetry either from acute or chronic injury. Scapular orientation can result in protracted scapulae, sometimes accentuated more on one side than the other indicating poor postural muscle control and soft tissue imbalances. The presence of scapular winging is also important. This will be examined further in a later section, but can sometimes be noted on scanning.

Position and posture of the sacral base, pelvis, lumbar, thoracic and cervical spines are significant. Lumbar spine kyphosis, or flattening, can cause head forward posture,

decreased overhead movements and other components of upper quarter dysfunction (Figure 3). Scoliosis anywhere along the spine can alter shoulder complex mechanics and should be identified in postural scanning. Shoulder heights are often uneven on observation.

Patterns or areas of muscular atrophy, hypertrophy or asymmetry of the entire upper quarter are imperative to visualize. For example, many direct glenohumeral traumas cause deltoid atrophy. Wasting of the muscles over and adjacent to the scapula (i.e., teres minor, infraspinatus, rhomboids), will be obvious if present. Upper trapezius, levator scapula, scalene and sternocleidomastoid tightness and contracture are often found in the shoulder patient. Manifestations of this include restricted mobility at various places in the upper quarter where dysfunction and pain can occur.

In addition to what has already been outlined, it is helpful to scan the lower quarter while the patient is wearing shorts (Figure 4). The throwing mechanics of a pitcher, for instance, can be greatly altered by pain or dysfunction in the lower kinetic chain, which adds significant stress to the shoulder. Often this complete approach will elicit a more successful treatment method.

Observation and inspection of the upper quarter takes only a short time for the experienced examiner and yields extremely reliable information regarding the patient. It is an essential step in the examination sequence that is often discounted.

Passive/Active Movements

Glenohumeral and shoulder complex mobility examination is another critical component of the examination. The author prefers to evaluate the unaffected side first, before proceeding to the injured side, beginning with the patient's active movement in forward elevation, elevation in the plane of the scapula, abduction, horizontal abduction, horizontal adduction, internal and external rotation. From the patient's limit, the examiner can then manually take the patient to his/her full passive limit. Assess movement both with the scapula fixed to isolate the glenohumeral joint and with the scapula free for overall shoulder complex evaluation (Figure 5). Motion should be assessed for restriction and can be measured goniometrically. Note pain over the arc of motion and end range. Judge end feel to be normal or abnormal, and classify as painful or painless and elastic or inelastic. The examiner must decide on the source of pain or restriction through this and other portions of the examination. Cyriax's end feel classification system can also be used.(5) In either case abnormal findings at end-range are important to understand in terms of structures involved. Treatment can be easily directed to the restricted structure.

Symptomatic and painful arcs, both actively and passively, are also of great significance as these often represent the patient's chief complaints. Subluxations of the glenohumeral joint and glenoid labrum tears can cause a painful arc which can be seen with passive and active testing. Impingement of the rotator cuff and biceps tendon will also present similarly. Clicking and subluxation can present without pain while taking the glenohumeral joint through a range of motion.

It is crucial to deviate from the traditional movements into movements and directions that reproduce the patient's symptoms. The patient will say it clicks or hurts while doing a specific movement. At that point the shoulder should be assessed for the abnormal finding.

Scapulohumeral rhythm with glenohumeral movements is often asynchronous with shoulder problems either secondary

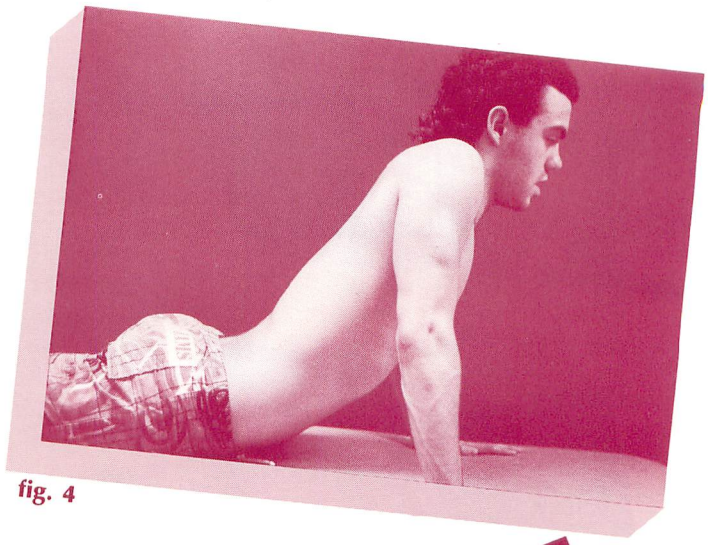


fig. 4

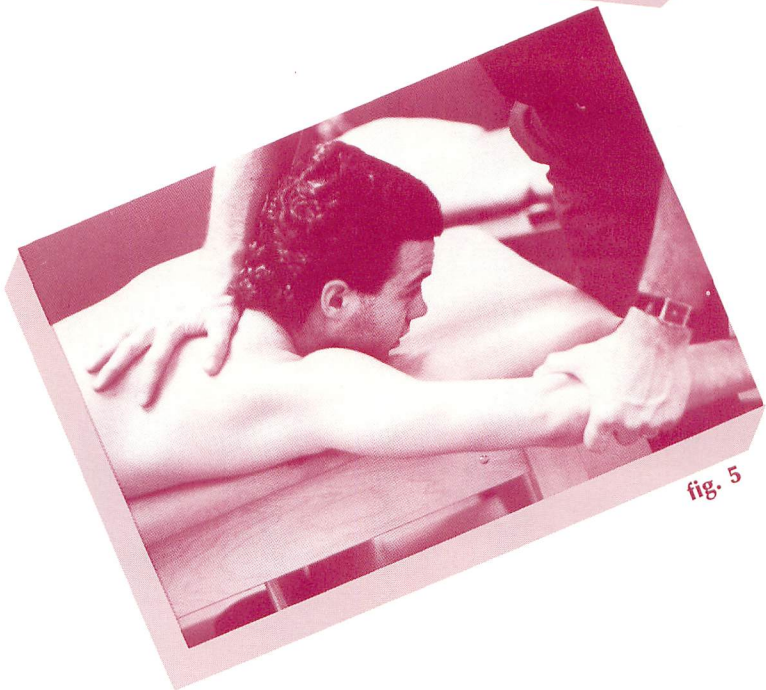


fig. 5

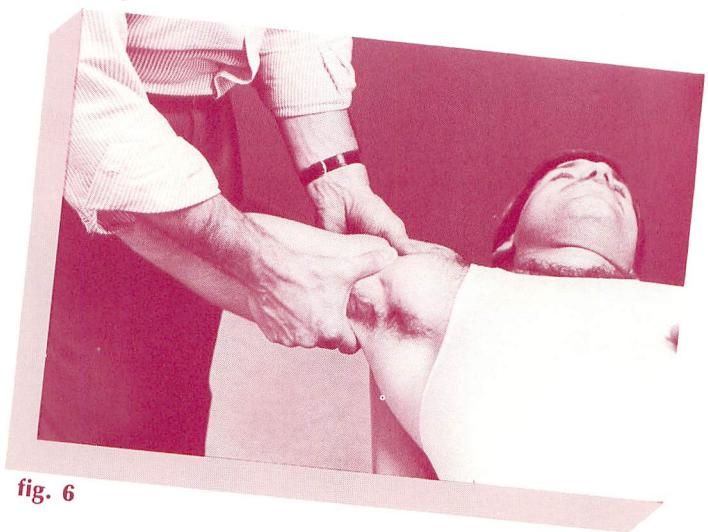


fig. 6

4. *Evaluation of spine extension with press up. Thoracic spine flattening noted.*
5. *Shoulder flexion with the scapula fixed tested in a prone position.*
6. *Anterior subluxation examination with passive anterior translation testing.*

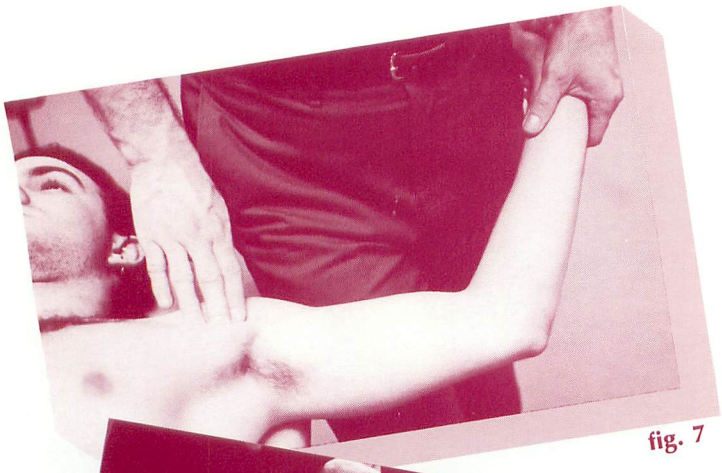


fig. 7

fig. 8

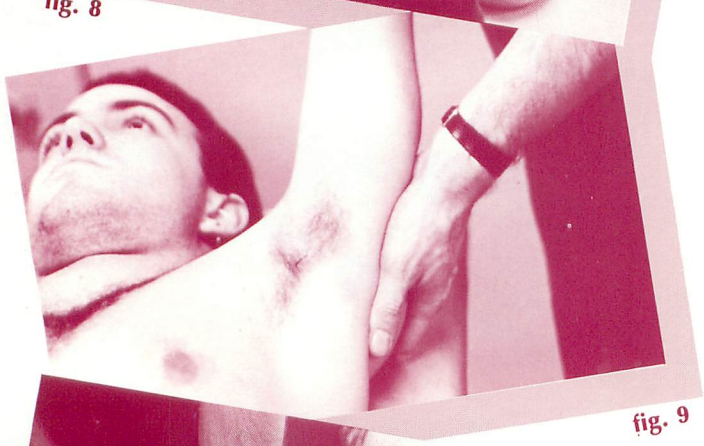


fig. 9

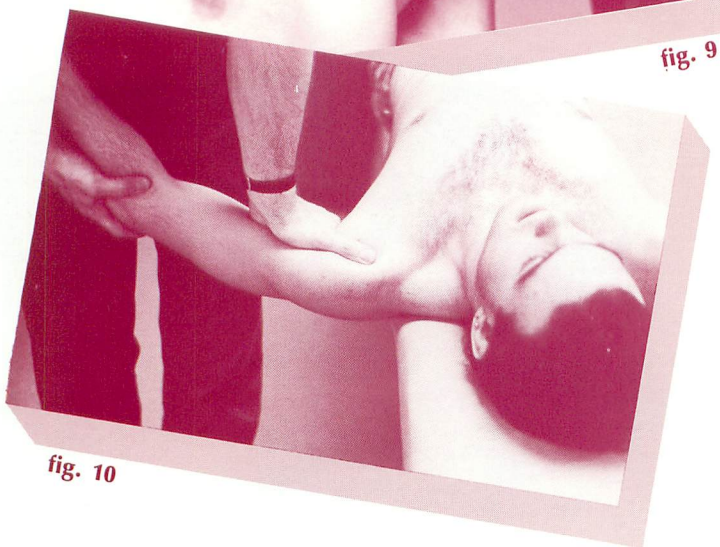


fig. 10

7. *Anterior subluxation examination with external rotation at 90 degrees abduction.*
8. *Posterior subluxation examination with passive posterior translation at 90 degrees flexion.*
9. *Posterior subluxation examination with passive posterior translation in the loose packed glenohumeral joint position.*
10. *Clicking and clunking secondary to glenoid labrum tears can be assessed with glenohumeral motion.*

to specific weaknesses or symptomatic arcs. Synergistic scapular support to the shoulder complex is a vital component of normal function. Andrew's method of assessing scapulohumeral rhythm (by palpating and following inferior angle mobility bilaterally with glenohumeral elevation) provides a simple and effective test.(1) The patient should also be assessed for passive/active movement at the elbow, wrist and hand. The cervical spine will be discussed in a later segment.

Evaluating the shoulder as it goes through either passive or active movement is another useful phase of the examination process. The examiner should explain any abnormal findings as often the patient's chief complaint can be reproduced here. Further evaluation is indicated, however, even if the chief complaint is identified.

Stability Testing

Glenohumeral joint instability in workers and athletes is a leading cause of shoulder dysfunction and pain. Rotator cuff tears and biceps tendonitis can result from overuse as a dynamic restraint with repetitive functional movement. The glenoid labrum is another important restraining component and can be torn with resultant pain and disability.

Stability examination can be performed for anterior, posterior and inferior instability. These are passive accessory mobility tests for the most part, and depend on patient relaxation for accuracy. Inferior instability can be reproduced by simply distracting the humerus inferiorly with the patient's arm hanging freely at the side while in a sitting position.(21) Examination will reveal a large space developing at the superior glenohumeral joint that can be palpated and visualized. This is usually present bilaterally, making comparison to the other side equivocal.

Posterior instability is most easily identified with the shoulder in 90 degrees of flexion (Figure 8). Norwood and Terry describe a test where the arm is taken from 90 degrees of abduction horizontally to 90 degrees of flexion.(17) As the shoulder reaches 90 degrees of flexion it will sublux posteriorly with capsular laxity and can be palpated. Moreover, excessive posterior instability in the loose packed position (as described by Kaltenborn) can be observed with a posterior translatory force (Figure 9).(12)

Subluxations and dislocations of the glenohumeral joint are often accompanied by glenoid labrum tears. If clicking and snapping occur with passive and/or active motion testing, a glenoid labrum tear can be suspected as a possible cause (Figure 10). The presence of instability, along with a patient history and chief complaint consistent with labrum tearing, will help confirm the diagnosis of a torn labrum-capsular complex in the presence of instability.

The radiological examination needs to be understood and correlated to this aspect of the patient's problem. Axillary views can reveal anterior/posterior subluxations. Hill Sachs lesions that are the result of instability can often be identified in addition to other bony lesions on standard radiographs. Bone scans, arthrography and magnetic resonance imaging are other valuable radiological diagnostic tools.

Instabilities in the shoulder patient are often multidirectional. Acute subluxations and reduced dislocations sometimes present with a stiff, hypomobile glenohumeral joint. If instability has been diagnosed, direct manual mobilization techniques may be contra-indicated in the presence of restricted glenohumeral motion. The patient should be observed closely for recovery of motion. Excessive forces applied to the

capsule could cause further instability.

Passive mobility testing for the sternoclavicular, acromioclavicular and scapulothoracic joints according to the procedures described by Donatelli and others are assessed for hyper/hypomobility and/or pain.(7,12,15,18,20) These can vary asymmetrically on bilateral comparison. All positive findings should be noted. Restricted sternoclavicular mobility, for example, can significantly alter glenohumeral movement in the upper extremity.

It is crucial for the physical therapist to be able to identify and diagnose shoulder instability. Treatment will be dramatically different for the stable verses the unstable shoulder.

Resisted Testing: Neuromuscular Examination

Neuromuscular examination of the shoulder complex components can assess muscle function in quantitative and qualitative terms. The position of the glenohumeral joint must be considered when asking the patient for muscular contractions. Impingement of various soft tissues, compression of bony and cartilaginous structures and/or excessive laxity can be reproduced, causing reflex neuromuscular inhibition mechanisms and, therefore, muscular weakness. In this case, the joint must be repositioned, if possible, to negate pain coming from sources other than the musculotendinous structure being tested.

Manual muscle testing should include assessment for strength (in terms of ability to hold or stabilize a specific position), fatigue, relaxation, length, smoothness and coordination (through a range of movement both concentrically and eccentrically). Simultaneously palpate the muscle tested to confirm maximal or appropriate recruitment, pain, defect, atrophy, hypertrophy and tendon gliding properties. Correlate positive findings with the patient's overall physical examination and chief complaint, including reproduction of symptoms.

The author begins with scapular evaluation according to the procedures of Daniels and Worthingham and Kendall and McCreary for serratus anterior, trapezius: upper, middle and lower, levator scapula and rhomboids.(6,13) Andrew's method of serratus anterior testing for scapular winging can also be used.(1)

Glenohumeral testing with the patient sitting in the neutral position has been described by Cyriax.(5) Positive results, however, can correlate to shoulder instabilities since active contraction will translate the humeral head against the capsule along with its synergistic restraints. Pain and laxity may be reproduced across these structures.

Jobe and Moynes presented postures for testing of the supraspinatus, infraspinatus and subscapularis.(11) Blackburn also tested the rotator cuff for EMG activity in various positions that can be used for testing.(4) Other positions that can be used have been described by other authors.(6,10,13) All are important for neuromuscular assessment. They can be supplemented by positions isolated to the patient's complaints or symptoms and correlated with other positive findings.

Palpation

Several excellent sources for palpation in the literature provide useful information to the examiner.(5,9) Palpation should note the presence of tenderness, warmth, swelling and defects. It can be combined with resisted mobility and range of motion testing and/or performed independently.

A patient with a painful shoulder presents frequently with rotator cuff and biceps tendon symptoms that can be easily palpated.(1,3,8,17,21) Cyriax describes positions for palpating

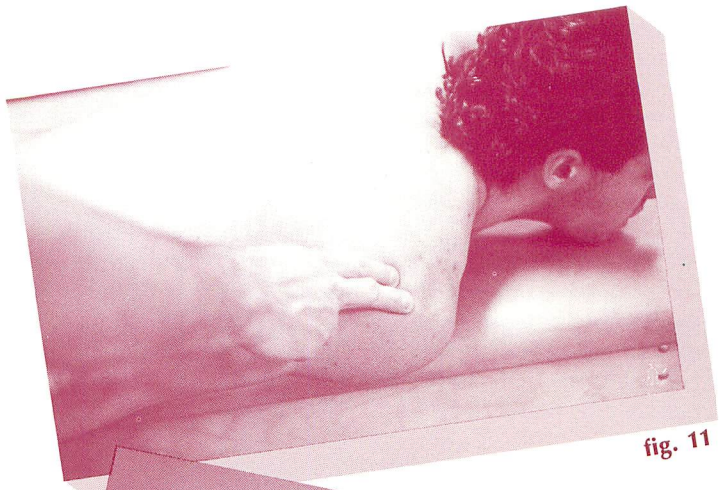


fig. 11

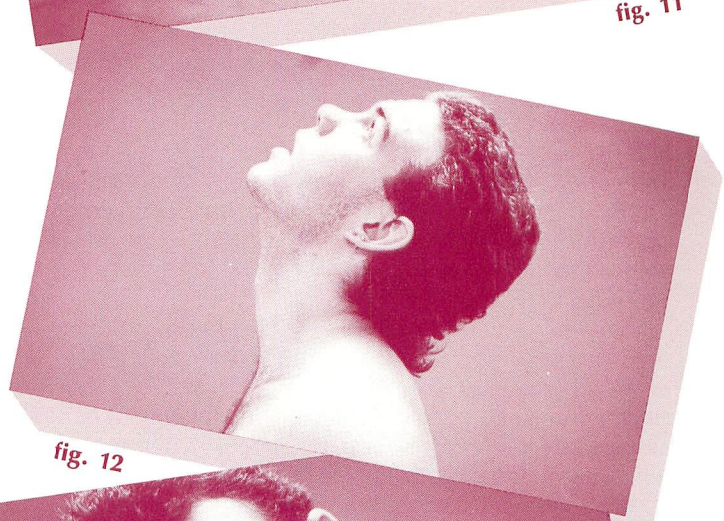


fig. 12


fig. 13

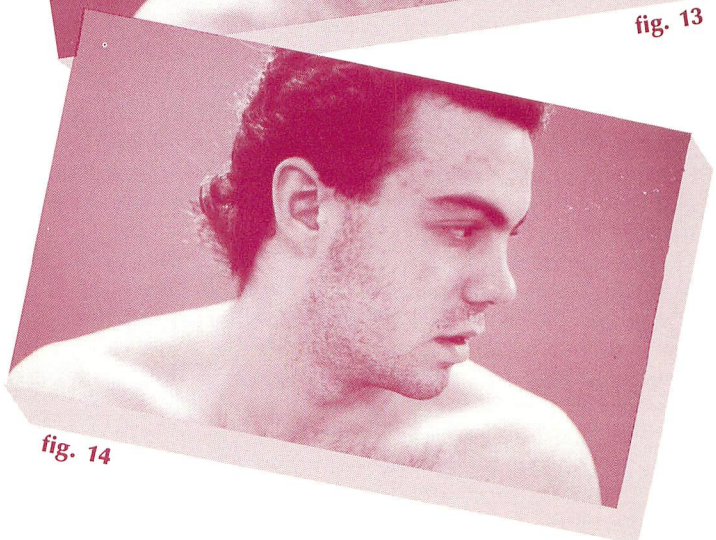


fig. 14

11. Palpation of posterior glenohumeral structures with the patient prone.
12. Cervical extension limitation.
13. Cervical sidebending limitation.
14. Cervical rotation limitation.

the tenoperiosteal and musculotendionous junctions of the supraspinatus tendon as well as the infraspinatus, subscapularis, teres minor and long head of the biceps tendons.(5) Trigger points in muscle and myofascial elements of the shoulder and upper quarter are important to palpate as they often reproduce the patient's chief complaint (Figure 11).

Bony structures that should be palpated include the sternum, clavicle, humerus, acromion, scapula and coracoid process. Besides the rotator cuff and biceps tendon, other important soft tissues to palpate are the subdeltoid bursa, axilla (including the brachial artery), lymph nodes, latissimus dorsi and pectoralis major, coracohumeral and glenohumeral ligaments. The acromioclavicular and sternoclavicular joints should be palpated as well.

Upper Quarter Examination

The importance of examining the cervical and thoracic spine and entire upper quarter cannot be overemphasized. Many shoulder problems have their origins rooted in the complexities of the cervical spine. It is not uncommon for adolescents and young adults to present with cervical abnormalities and symptoms such as facet joint arthrosis, disc derangements and nerve root encroachment. Thoracic outlet syndrome is also commonly seen in persons whose activities require repetitive overhead activity.

Partial examination of the cervical spine has already been seen through observation/inspection and resisted testing. Range of motion can be grossly evaluated in flexion, extension, sidebending and rotation (Figures 12-14). Note loss of motion, as well as pain and individual segment hyper/hypomobility with movement and deviations. Limitations may be of several origins and can be factored out with further examination, such as segmental mobility testing and extensive upper quarter myofascial examination. Any reproduction of shoulder or radicular upper extremity or localized cervical pain or symptoms are important findings.

The thoracic spine should undergo a similar regional examination. Loss of rotation or asymmetries can be limiting to the swimmer or baseball player who needs that mobility for functional requirements of their sport. Extension limitations here and at the lumbar spine are common sequelae of poor posture.

Thoracic outlet syndrome is frequently encountered as the result of postural and myofascial abnormalities. Diagnosis can be made by a variety of tests. Leffert describes several tests that are important in identifying this problem.(14) EMG studies may be used to supplement the physical examination findings.

Neuromuscular testing for the upper quarter includes sensory, reflex and upper quarter myotome testing. Ulnar, median and radial nerve stretching will elicit symptoms with involvement of each respectively.

Temperomandibular (TMJ) joint dysfunction is also a common source of upper quarter pain that can be mistaken for a shoulder problem. TMJ arthrokinematics can be altered as the result of head forward postures and myofascial syndromes associated with shoulder dysfunction. Reviewing this joint is a necessary part of the examination process.

Upper quarter dysfunction can play a large role in shoulder signs and symptoms in upper extremity athletes. Diagnosis of the shoulder should not be considered complete without evaluating the entire upper quarter. Too often this aspect of examination is overlooked and abnormalities are not resolved that contributed to the patient's dysfunction. Continued cyclical pain and compensatory mechanisms evolve that limit patient function.

Impingement Sign

Neer defined impingement of the rotator cuff against the coracoacromial arch and undersurface of the anterior actomion.(16) He described an impingement sign to reproduce this lesion. Other impingement signs have been presented by Hawkins and Warren.(8,21) Each is done passively and can be meaningful for diagnosis. They often reproduce patient complaints.

These signs can be performed separately or with other passive motion tests. When rotator cuff swelling is significant, a positive impingement sign will be elicited. It can be used as an effective re-evaluative tool for the rotator cuff during rehabilitation. As the impingement sign becomes negative, patients can be treated more aggressively with resistive exercise. Conversely, if the impingement sign is more painful, rotator cuff activity must be introduced carefully.

Assessment

After completing all aspects of the clinical examination, an assessment should be made. A diagnosis upon which treatment can be based should follow. Re-examination will continue to be necessary as the patient proceeds through treatment. Often the most relevant or obvious diagnostic conclusions are unreliable and mislead the clinician. If treatment is ineffective, differential diagnosis must be considered.

Plan

Setting up a treatment plan after assembling all the clinical facts is the next sequence in patient management. Short and long term goals must be established. All aspects of upper and lower quarter dysfunction must be taken into consideration. Clear contra-indications to specific treatment procedures are identified as needed.

Prognosis is made based on diagnosis, potential response to the proposed treatment plan and previously reported courses of treatment. Alternatives to this program should be outlined and instituted within appropriate periods of time. Consultation with other professionals and specialists may be necessary.

The best shoulder treatment approach is one that is instituted immediately following onset of injury or pain, based on complete and thorough diagnosis, altered by changing patient signs and symptoms and consisting of effective, goal-oriented treatment techniques and modalities used with complete knowledge of your patient's upper quarter considered.

Summary

The patient who presents for diagnosis and treatment of shoulder dysfunction can present with a complex of difficult to manage signs and symptoms. Often their problem is of insidious onset, the result of months or years of repetitive microtrauma to various structures. Reversing these syndromes in the very active and/or highly competitive individual is challenging.

Treatment depends on diagnosis; therefore, meticulous clinical examination and supplementary diagnostic tests are necessary to identify the problems which must be addressed in treatment.

Continued on page 32

ORTHOPAEDIC EDUCATION PROGRAM

Z. Annette Iglarsh, P.T., Ph.D. Education Program Chair

The educational sessions were well attended. The program began with sessions held in combination with the Education Section. These classes, held on Thursday, February 2nd, covered hip biomechanics, teaching mobilization and a discussion of mobilization and orthopaedics in academic programs. A great interchange evolved and it was agreed that a task force made up of members of both sections would be established to determine an effective means of studying the status of orthopaedic studies in academic curricula.

Friday, February 3rd, was a cooperative effort with the Sports Physical Therapy Section and covered knee injuries and repairs and shoulder arthroscopy. Saturday began with our section business meeting which was attended by over 45 people. The orthopaedic research presentations were next. We are pleased to announce that these papers were of such high quality that they attracted an almost capacity audience. Sessions shared with the Cardiopulmonary and Private Practice Sections covered fitness programs in industry and reimbursement for these programs. Sunday, February 5th, completed this successful CSM with joint programming with the Hand and Private Practice Sections covering traumatic hand injuries. I would like to thank our excellent speakers for their time and expertise.

"Black Tie and Roses" was a success once again, due to the enthusiasm of all those in attendance. Donald Neumann of Marquette University received the first Steven J. Rose Endowment Award for Excellence in Orthopaedic Physical Therapy Research. Since Steve Rose was unable to attend a video tape of the evening was made and everyone had the opportunity to give a message to Steve.

Next year, CSM 1990, "Black Tie and Roses" will be combined with the Orthopaedic Section's 15th Year Anniversary and a dinner to benefit the Orthopaedic Section Minority Scholarship Fund. Please watch for further details as the time approaches in Orthopaedic Physical Therapy Practice.

CSM 1990 will also contain the first scheduled Ortho Round Table. This format will permit sub-specialties of orthopaedics to have a specified speaker and meeting time and place. Costs and administrative support will be furnished by the Section. This year the first two Round Table groups will be Industrial Physical Therapy and Podiatric Physical Therapy. Orthopaedic Physical Therapy Practice will contain more details in future issues.

The first issue of the Orthopaedic Section home study course on the low back published by Forum Medicum is in the mail. This is the first in a series of activities developed by the Section to provide different types of educational experiences for its members.

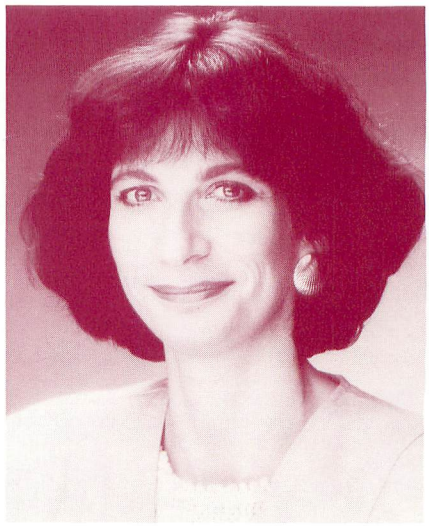
During the spring of 1990 there will be a joint meeting with the Orthopaedic Physical Therapists of Canada. Negotiations began in Las Vegas during the Joint Congress in 1988. The joint Orthopaedic meeting will take place in Ottawa as Canada serves as the first host.

The second in the series of the Orthopaedic Advanced Competencies courses was held in Phoenix, Arizona. Over 130 individuals attended this course and enjoyed the quality program. Once again the experienced faculty provided a comprehensive program and created an atmosphere of information sharing among the professionals in attendance.

All of the Section's members owe thanks and recognition to the course faculty:

Walt Personius
Sandy Burkart
Russ Woodman
Jim Porterfield
Bob Mangine
Dan Riddle

Evanston, Illinois, outside of Chicago, is the next course site and is scheduled for August 6-12. Register early because the course's quality reputation is established!



PRACTICE SPOTLIGHT

ORTHOPAEDIC PHYSICAL THERAPY

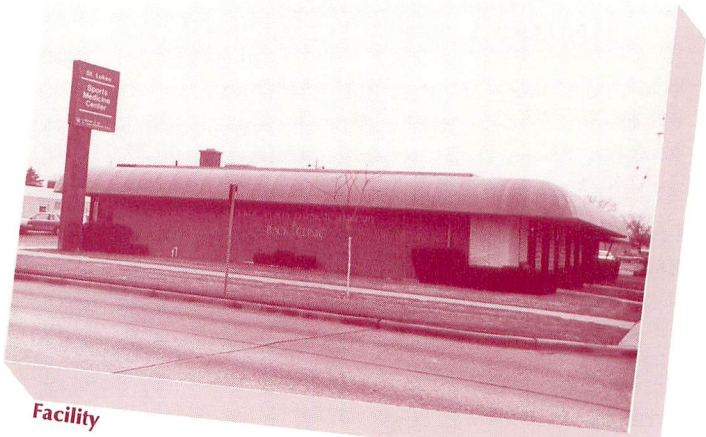
Kent E. Timm is the Assistant Director of Physical Therapy for St. Luke's Healthcare Association of Saginaw, Michigan and manages the St. Luke's Sports Medicine Center. Kent received his Orthopaedic Physical Therapy education at the University of Pittsburgh under Rick Bowling and Dick Erhard. He has a Ph.D. in exercise physiology, is certified as an athletic trainer, and was a member of the first class to receive Sports Clinical Specialty certification by the American Board of Physical Therapy Specialties. Kent is also a Fellow of the American Back Society. Kent's colleagues at the St. Luke's Sports Medicine Center include Joan Baratto, PT, Peter Gennrich, PT, Tammy Ruch, PT, Mike Stroyan, PT, Jody Watts, PT, Anne Flatley, ATC, Bill Quinn, PTA, ATC, and secretaries Penny Libby and Terrie Orange. St. Luke's complete clinical operations are administered by Bob Long, PT, Director of Physical Therapy.

The Sports Medicine Center was established in April 1984 as mid-Michigan's first comprehensive athletic rehabilitation, clinical research, orthopaedic physical therapy, and sports medicine facility. The Center serves the needs of teams from 10 regional high schools, 4 colleges and universities, the Saginaw Hawks of the International Hockey League, and members of the United States Short Track Speedskating Team. The Center also cosponsors the annual July 4th Volkslaufe road races in Frankenmuth, Michigan.

In January, 1986, the Center opened the St. Luke's Back Clinic, central Michigan's first complete center for preemployment screening, work hardening, and industrial physical therapy. The Back Clinic developed into the St. Luke's Hospital interdisciplinary Business Health Team, incorporating emergency medical, occupational medical, laboratory, nursing, nutritional, cardiopulmonary, radiographic, and administrative services, which serves the needs of over 70 local businesses and industries, including the City of Saginaw, Dow Chemical, and Saginaw Division of General Motors.

In September, 1988, the Center opened the St. Luke's TMJ Clinic, the first orthopaedic physical therapy venture in the Saginaw area for managing patients with TMJ pain and dysfunction. The TMJ Clinic operates under a team concept with local dentists, periodontists, and oral surgeons to complement the traditional dental approaches to TMJ syndromes with contemporary orthopaedic physical therapy techniques.

The St. Luke's Sports Medicine Center is also involved with clinical research in the fields of orthopaedic physical therapy, sports medicine, and industrial rehabilitation. The Center will begin offering formal professional continuing education courses in the second half of 1989.



Facility

Staff (L-R): Kent E. Timm, Joan Baratto, Penny Libby, Jody Watts, Bill Quinn, Debbie Gilbert, Anne Flatley, Mike Stroyan, Terrie Orange

Assistant Director Kent E. Timm

FINANCIAL

FINANCIAL STATEMENT ORTHOPAEDIC SECTION

The following is an unaudited statement of the Section's finances. A formal return is currently being produced by the Section's accounting firm, McGladrey & Pullen in La Crosse.

FINANCIAL STATEMENT
JANUARY 1, 1988—DECEMBER 31, 1988

CASH ON HAND DECEMBER 31, 1987	
Checking	$31,316.00
Investments	$177,762.00
TOTAL CASH AND INVESTMENTS	$209,078.00
CASH RECEIPTS 01/01/88—12/31/88	
Member Dues	$274,355.00
Regs & Exhibits	$10,253.00
Int. & Dividends	$18,723.00
Royalties	$279,911.00
Advertising	$28,579.00
Publication Sales	$28,579.00
Other	$1,545.00
TOTAL RECEIPTS	$641,945.00
TOTAL CASH AVAILABLE	$851,023.00
CASH DISBURSEMENTS	
Operational costs	
Temporary Employment	$772.00
Equipment/rent	$1,439.00
Supplies	$39,011.00
Telephone	$10,468.00
Postage	$20,050.00
Printing	$27,986.00
Audio/Visual	$955.00
Travel	$20,446.00
Perdiem	$27,448.00
Professional Fees	$8,243.00
Consultant Services	$1,980.00
Awards/grant	$9,410.00
Dues	$680.00
Subscription	$310,429.00
Miscellaneous	$2,651.00
Admin. Dir. Con.	$20,000.00
Adv. Exp.	$10,138.00
Sports Royalty	$45,127.00
Speaker Fees/Travel	$3,924.00
Advert Exp.	$4,024.00
Meet Services	$4,844.00
TOTAL	$570,025.00
Section Office Expenses	
Payroll Taxes	$8,892.00
Equipment Rental	$101.00
Credit Card Fees	$243.00
Answering Service	$43.00
Outside Services	$413.00
Bank Charges	$167.00
Janitorial	$783.00
Taxes & Licenses	$169.00
Rent	$845.00
Lease	$14,109.00
Utilities	$805.00
Insurance	$2,401.00
Repair & Maint.	$1,674.00
Personnel	$72,200.00
Accounting	$2,001.00
Other	$2,189.00
TOTAL	$107,035.00
Annual Conference	
Travel	$5,023.00
Perdiem	$6,459.00
Meet Serv.	$5,202.00
Miscellaneous	
TOTAL	$16,684.00
Combined Sections Meeting	
Printing	$169.00
A-V	
Travel	$5,231.00
Perdiem	$7,793.00
Meet Serv.	$1,036.00
Speaker Exp.	$1,212.00
Honorarium	$690.00
Trav./Perdiem	
TOTAL	$16,131.00
TOTAL CASH DISBURSEMENTS	$709,875.00
NET OPERATING REVENUE	($67,930.00)
CASH ON HAND 12/31/88	
Checking	$38,223.00
Investments	$114,124.00
TOTAL	$152,347.00
NET GAIN	($56,731.00)

strategy

COOL IT

by James A. Gould

In the past, and unfortunately the present, the extremities were treated based upon known physiological facts whereas the back was treated by theory and dogma. Therefore a dicotomy of treatment has evolved regarding the tissues of the back versus the ankle or the knee.

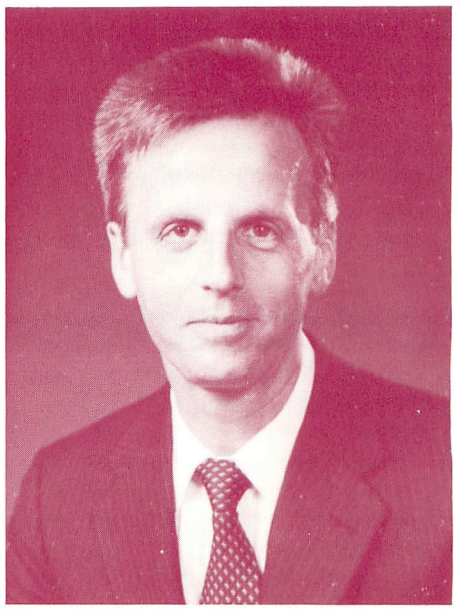
If you sprain your ankle, the normal progression of treatment is Ice, Compression, and Elevation for the initial stages, protection from reinjury, gentle movement in water or just ankle pumps. This is followed by touch weight bearing building to full weight bearing, and often theraband or surgical tubing exercises are given for strengthening. If compartment syndrome should appear in the anterior leg emergency measures are taken to reduce the swelling and accomodate for the swelling.

On the other hand, if you should sprain your back, the treatment is usually entirely different. You are completely immobilized in bed with hot packs or a heating pad recommended for 20 minutes three times a day. It is recommended that you remain in bed, move as little as possible, take muscle relaxants, and an appointment is made for 1-2 weeks later. Compartment syndrome is unheard of and when physical therapy is ordered, we use ultrasound, diathermy, hot packs, interferential current etc.

Yet, we should take a look at what we know anatomically. There are compartments in the spine, its entire length, and when filled with fluid they flatten the back (not muscle spasms) and cause compression of the tissues within the compartment. The compression and destruction of joint receptors is compounded by the destruction of the muscle spindle found especially abundantly in the small muscles (interspinalis and intertransversarii) and to some extent in the semispinalis, multifidus and the rotatories. These are encased in the thoraco lumbar fascia and their own fibrous sheaths. If we add heat we increase the metabolic needs of the muscle and nerve and add compression of the blood vessels to reduce the available nutrients.

Through destruction of the receptors, we reduce the proprioceptive awareness of the person treated. In addition we selectively destroy the non-noxious type I and II receptors as well as the muscle spindles which gate pain and balance the free nerve ending input.

Therefore, why don't we try measures that are normally used in the extremities on the back? Ice, cold packs, gentle muscle stimulation and massage to assist in fluid dynamics. Gentle passive extension helps to remove fluid from the compartments. Gentle active movement such as bridging, knee to chest, and mild twists help maintain good nutrition to the disc and assist with fluid dynamics as well.



James A. Gould is associate professor and acting director of the Physical Therapy program at the University of Wisconsin-La Crosse.

MEETING MINUTES

ORTHOPAEDIC SECTION
HAWAII FEB. 4, 1989

CALL TO ORDER

The Business Meeting of the Combined Sections Meeting was officially called to order at 7:40 AM.

PRESIDENT'S REPORT

A. Approve Section Business Meeting Minutes (from the 1988 Section Business Meeting held during Annual Conference in Las Vegas, June 1988, as printed in the Section *Bulletin*)

—MOTION—It was moved and seconded to approve the Section Business Meeting Minutes as printed in the Section *Bulletin*.

—PASSED—

B. Review and Accept Agenda.

—MOTION— It was moved and seconded to accept the agenda as printed.

—PASSED—

C. Review of Meeting Procedures. - Format of the Meeting - Motion Forms

D. Cooperative efforts with *McCall's Magazine*. The Section has been contacted regarding an article on isometrics for the cervical spine which is to appear in the February 1989 issue. The Section was referred to in that issue. The March 1989 issue will contain low back exercises. Jonathan Cooperman, in his Public Relations report, will cover other activities in which the Section is involved cooperatively with McCall's Magazine,

EXECUTIVE COMMITTEE REPORTS

Vice-President—Duane Williams

Update on leadership training from Fall Executive Committee Meeting—the objectives are to provide orientation for Section Officers and Committee Chairs, evaluate and improve the strategic planning process, and revise the Section's organizational structure.

This continues to be an ongoing process. A survey was conducted after the Fall Executive Committee Meeting (of all Officers and Committee Chairs). The leadership training consisted of reviewing the strategic plan, reviewing the process of strategic planning and updating the Section Policies and Procedures Manual.

Sharon Meehan, Director, APTA Component Relations, attended this fall meeting to assist with strategic planning and answer questions on the relationship of the National office and Sections. Bill Fromherz and Duane Williams are now responsible for reviewing and guiding the updating of the Policy and Procedures Manual. A preliminary draft is to be completed by Annual Conference this June in Nashville.

Treasurer—Bob Burles

Bob reported that because of our rapid growth it is very difficult to keep a handle on just what is going on with our expenses and income.

Comparing actual expenses for 1988 and the budgeted expenses for 1988 indicated that we are very good at predicting our expenses but we need improvement on predicting our income.

For the 1989 budget we were very conservative in the amount of income that we have predicted and have not allowed our budgeted expenses to exceed that amount.

Member-at-Large—Bill Fromherz

The report from the Member-at-Large is published in the new Section publication, Orthopaedic Physical Therapy Practice, January 1989. APTA has approved our Bylaw amendments and as of December 26, 1988, our bylaws are in compliance with APTA. APTA has simplified the procedure for submitting of Bylaw amendments for approval by APTA and their Parliamentarian. This new procedure requires that we submit the Bylaw amendment to APTA, they will analyze for compliance with the APTA Bylaws, and return to us for voting to approve or disapprove it. Currently we are voting on the Bylaws prior to APTA approval.

Our membership has increased 7% over the 1987 figures, placing us at 10,095 members for year-end 1988. Our 1988 strategic plan states that we wanted a 5% increase in membership over the 1987 figures. We have more than met that goal.

The President commented that by maintaining our own membership list with the monthly update diskettes from APTA, our list is much more accurate. It is updated on a daily basis. Two direct mailings in 1988 generated a significant increase in membership.

Education Program—Annette Iglarsh

The Education and Program Committees were combined into one last June, resulting in the newly named Education Program Committee.

The first Advanced Competencies Course was held in Orlando last August (1988). Currently we have 101 registrants for the February course (in Phoenix) and a few for the August course (1989) in Evanston, Illinois. There have been two speaker changes; Walter Personius will now be speaking about the cervical spine and Sandy Burkart will be discussing the entire upper extremity and not just the shoulder. Speaker changes were made due to scheduling difficulties.

CSM 1989 is well under way. We have made a great effort to conduct joint programming to keep everyone's expenses down and still maintain quality programming. The joint programming is something that we would like to continue for 1990.

The Black Tie and Roses Reception will be this evening, February 4, from 7-9PM. This will be our first presentation of the research award. Since Steve Rose will not be attending this reception, arrangements have been made to video tape it in "home movie" style; a copy will be sent to him.

A preliminary schedule for CSM 1990 in New Orleans has been set. The programming will focus on research. We will be co-programming with several other Sections. The specifics of the program are quite premature. A new type of programming will be offered called Ortho Round Table. A two hour time slot has been set aside for special interest groups within orthopaedics to meet. The two special interest groups that will be highlighted at this meeting are industrial rehabilitation or industrial physical therapy and podiatric physical therapy. They will each have an hour of programming.

The first manuscripts for the Forum Medicum/Orthopaedic Section joint venture Post Graduate Advances for Low Back Dysfunction have been received. We have over 200 registrants for this program. Our next topic will be the cervical spine. We anticipate starting this course once we are at least six manuscripts into the Low Back course.

Because the Sections are only given two days of programming at Annual Conference 1989, the Executive Committee decided to move the Section's 15th Anniversary to CSM 1990 in New Orleans.

Jan Richardson thanked Annette for the time and energy she has put into being the Education Program Chair. Without Annette's diligence and commitment behind the scenes, we would not be able to provide the quality of services we have for our members.

Editor/Publications Chair—Jim Gould

The format and style of The Journal of Orthopaedic and Sports Physical Therapy (JOSPT) has been changed with the January 1989 issue. Any comments you may have about the new format are welcome. The cover will change each month and will sometimes reflect the articles inside.

The *Bulletin* has changed to a magazine-type format and its new name is Orthopaedic Physical Therapy Practice. The colors match those of the new *JOSPT*. Other anticipated changes will be to have more of a picture format with practice highlights, case studies and space for tips and information. We are now requesting submissions from you or other members. This publication will be an unrefereed publication compared to the double-blind review process the *JOSPT* manuscripts go through.

We are currently reviewing the publication process of the *JOSPT* and are looking into the possibility of self-publication versus the use of a publisher as we currently have. A proposal will be gathered with ideas and information being reported to you in June.

Jan Richardson commented that during the past year the Ortho Update has been a forum for the President's message to the membership. These messages will be incorporated into the new Orthopaedic Physical Therapy Practice. The Ortho Update will be discontinued at this point in an effort to save these additional costs.

Administrative Director—David Thomack

The Section is settling into its new office space, again. This is the third move in the two and a half years since the Section office has been in La Crosse and is a result of the significant growth the Section has experienced over this time period. The current suite has 3,000 square feet with additional space available as necessary.

Three new staff members were added during the course of this past year: an Administrative Assistant (Terri Pericak), a full-time *Journal* secretary (Theresa Cieminski), and a membership/general secretary (Patty Sherry). This last position was created instead of publishing a membership directory, which would have been obsolete as soon as it was printed, and would have been extremely expensive. Instead we opted to hire someone to act as a full-time membership person, thereby saving money and offering better services to the membership. Part of this money was also used to install an incoming 800 number for membership services as of January 1, 1989. This number was published in the January issue of *Orthopaedic Physical Therapy Practice*. It is 1-800-356-2255; at the dial tone, touch in 1133.

Bob Burles has helped us tremendously with our membership services. He also installed a network system for our computers. All of our offices have PCs which are linked through the Novell Network System. These PCs are also linked to dot matrix and laserjet printers for everyone's use. Bob has also set up an accounting system for us with the Solomon software.

The Section office continues to cooperate with all the Executive Committee Officers as well as the Committee Chairs and the Specialty Council to carry out their projects.

The Section went through an unemployment compensation audit in December with no problems. This was for the years 1986 and 1987.

We continue to work on generating non-dues income, with considerable success.

COMMITTEE REPORTS

Nominating Committee (Governance 01)—David Apts

The Section has three offices which we need to vote upon this year. These are the offices of President, Vice-President and a member of the Nominating Committee. A slate of candidates was presented to the Executive Committee during their meeting earlier this week. The second person slated to run for President recently declined because of other obligations. Because of this situation nominations were solicited from the floor. Because no nominations were received from the floor, the slate will be as follows:

President—Jan Richardson, incumbent. Unchallenged.

Vice-President—Duane Williams, incumbent, and Joseph Vierzbicki.

Member of the Nominating Committee—Helen Price, Rosalyn Sofer, Floyd Watson, and Scott Hasin.

—MOTION—It was moved and seconded that the slate for nominations be accepted as presented.

—PASSED—

Lastly, Chair Apts encouraged all to exercise their right to vote when the mail ballot arrives.

Research (Research 06)—Joe Threlkeld

The Research Committee is pleased to be presenting the first Steven J. Rose Endowment Award for recognition of a physical therapist who has conceived, conducted and published research in the field of physical therapy. This award will be presented at the "Black Tie and Roses" reception, tonight. The abstract of this article will be presented immediately following this meeting. The winning article is "Comparison of Maximal Isometric Hip Abductor Torques Between Hip Sides" by Donald Neumann, Gary Soderberg and Thomas Cook, and was published in Physical Therapy, April 1988. The submitted abstracts underwent multiple blind reviews. Those abstracts, other than the Steven J. Rose Award winner, are published in the Orthopaedic Physical Therapy Practice, January 1989. For the future, we are asking the membership to bring researchers together in some form of a question and answer format. A forum on critical issues and orthopaedic research needs to be held. We need to have more open dialog regarding what needs to be done in orthopaedic research with attention given to the fundamental issues of educational requirements. The Research Committee is working with the Education Program Committee on this for the Combined Sections Meeting in 1990.

Practice Affairs (Practice 08)—Garvice Nicholson

This Committee, along with Jan Richardson, has been involved in correspondence with Representative Stark's legislation regarding referral for profit. We supported this legislation and attempted to include the request by Charles Harker (from APTA), that we discuss the loophole issue of the employment of physical therapists in physicians' offices. Currently the Committee is involved in planning for a forum to be published in the *Orthopaedic Physical Therapy Practice*. The purpose of the forum would be to discuss issues relative to orthopaedic physical therapy, House of Delegates activities that apply to us, and the issues of diagnosis and

manipulation. Additional ideas of discussion are welcome from you. The Committee also surveyed U.S. chiropractic institutions regarding the number of manipulation content hours in their programs. Chiropractors are legislatively using this issue in various states as leverage. Some attempt directly to introduce legislation that would prohibit physical therapists from manipulating, and using this issue as a bargaining chip in the place of going for direct access. It is important that we address this issue and the number of hours that we spend in this area. Joe Threlkeld commented that Kentucky had experienced similar issues regarding who was qualified to do what (manipulation). The most important basic course work points back to the fact that physical therapists have excellent introductory and functional anatomy backgrounds which places us (physical therapists) in a stronger position. The Education Program Committee, for CSM 1990, is considering, with the Section on Licensure, a half day of programming dealing with mobilization issues and licensure in different states across the United States.

Public Relations (Public Relations 09)—Jonathan Cooperman

McCall's Magazine February 1989 issue will contain a generic article on low back pain. In conjunction with that article they will be publishing an 800 number for the general public to call in and ask questions about low back pain. APTA asked the Orthopaedic Section to assist in staffing that 800 number. We have 10 to 12 Orthopaedic Section members in the Washington D.C., Baltimore, West Virginia area who will be assisting from March 6-10th. The Public Relations Committee is checking into the feasibility of using a private firm or APTA's administrative services to develop a marketing and/or public relations plan. The September issue of Orthopaedic Physical Therapy Practice will be devoted to the Section's 15th anniversary. We wish to provide a historical perspective of the Section as seen through the eyes of the Section's past presidents and some of the past officers.

Specialization—(Specialization 11)—Joe McCulloch

Orthopaedic Specialty Council (OSC) update.

The OSC, which consists of myself, Rick Ritter and Susan Stralka, just completed a four day meeting at Assessment Systems, Inc. (ASI), the new APTA testing firm in Philadelphia. Two non-council members assisted us in this session at ASI, Helen Price and Nancy White. At this meeting we reviewed the 360 items for our specialization exam. We have many more items in our data base to be approved for future tests. Over the four days we successfully developed three different versions of the test. We are now ready to give the test in several settings over the next couple of years. The current plan with the councils is to offer the test two times a year, once at Annual Conference and once at the Combined Sections Meeting (CSM). The Council wishes to thank you all very much for your participation in putting together this exam. Our first exam will be Saturday, June 10, 1989 in Nashville.

OLD BUSINESS

A. Discussion of House of Delegates (HoD) Motion regarding Section votes—Jan Richardson.

The Section Presidents met as a group Wednesday of this week to discuss strategies to achieve Sections being able to vote in the HoD. As a Section, we are eligible to have a delegate in the HoD, who may speak and discuss motions, but is prohibited from voting.

The APTA Task Force on Reorganizational Structure has presented a motion which will allow each Section to have a vote (seventeen in all, one for each Section). Each Section will also have two delegates. The most recent Ortho Update asked that, if your chapter has not yet selected delegates, you seriously consider becoming a chapter delegate. If your chapter has already selected its delegates, and you are not one of them, ask your delegation for time to speak to them about the advantages of allowing the Sections to have a vote. You may refer to the Ortho Update for the rationale.

B. Discussion of Policies and Procedures for Awards Committee - Duane Williams.

The Awards Committee is a special committee in which Kitty Serino is Chair. The policies and procedures have been written and will be going to the Executive Committee for approval. These policies and procedures are a revision of guidelines that APTA has in place.

Two other awards for future consideration are a Clinical Expertise Award and a Charitable Award. As soon as guidelines for these awards are written, they will be presented to the Executive Committee for approval.

C. Update on the Orthopaedic Section Challenge for Minority Scholarships—Jan Richardson.

Last year the Orthopaedic Section presented the Minority Affairs Committee a donation of $1,500 for their Minority Scholarship Fund through the PT Foundation. The impetus for this donation came from a report that Brenda Doughton had given at the Section's President's meeting stating that their scholarship efforts had been in place for two years and they had raised only $400. The Executive Committee decided to donate the $1,500 and initiate the Orthopaedic Section Challenge. The Challenge stated that if the Minority Affairs Committee and the PT Foundation could generate $25,000 in donations by June 1989 the Section would donate an additional $10,000 to the Minority Scholarship Fund. Last week Steve Seater, President of the PT Foundation, informed us that $21,000 has been raised and it appears that they will meet the June deadline.

Steve also mentioned that in April there is a dinner tentatively scheduled in Chicago; and Mr. Lang is going to sponsor the dinner and donate all proceeds to the Minority Scholarship Fund in the name of the Orthopaedic Section Challenge. They are hoping to generate $10,000 from that dinner. If so, by June that could put them well into the $50,000 range.

NEW BUSINESS

A. Proposal for Fiscal Independence of the Specialization Process—Jan Richardson.

The American Board of Physical Therapy Specialties (ABPTS) had been asked by the APTA Board two years ago to develop a plan for fiscal independence. Initially, when specialization came into focus around 10 years ago, it was intended to be a fiscally independent process of the APTA. APTA has, in addition to the Sections, been financially assisting this process. Two years ago the Board of Directors asked that ABPTS come forth with a plan. A year ago the ABPTS presented a plan to the specialty councils, the Sections involved in competency exams and the APTA Board of Directors. Based on the discussion generated, it became apparent that there were flaws associated with the proposed plan. A new task force was then developed consisting of two ABPTS board members and two specialty council board members. Because our Section was there and the original proposal had been presented to Sections

who had absorbed the greatest financial burden of the specialization process to date, our Section was asked to consider representation on that task force as one of the two Sections. The Orthopaedics and Neurology Sections are the representatives.

At the Section President's meeting this year, those attending felt that the six Sections who have examinations in place should make the decision as to which of the two proposals should be chosen, as presented by the ABPTS. Those six sections met and decided to support the second scenario. The general concept of the plan is that there will be percentage splits between the ABPTS and the Specialty Councils. The ABPTS will receive a percentage of the income, the Specialty Councils will receive a percentage and the remainder will go into an interest bearing contingency fund. That money will help to offset the cost of revisions and re-validation of the exams.

B. Proposed Joint Symposium with the Orthopaedic Division of the C.P.A. (Canadian Physiotherapy Association) - Annette Iglarsh

At our Combined Meeting in Las Vegas (Annual Conference 1988) the Orthopaedic Section was fortunate to meet with the Canadian group of physiotherapists. At that time, the feasibility of a joint program was discussed to be held in 1990. This program is scheduled for April or May in Ottawa. The Canadian Physiotherapists will handle the arrangements. Programming will be a joint decision between the two groups and the profits will be prorated according to attendance. We hope that this will continue to be an ongoing relationship.

C. Other.

Education Program Chair—Annette Iglarsh

At this CSM, here in Hawaii, we have a combined session with Education Section. Part of the session was to discuss what the educational programs in Orthopaedics were in the academic setting. We found great variability throughout the teaching of Orthopaedics and specifically mobilization throughout the accredited physical therapy programs in the United States. One of the problems associated with encroachment issues is that the first question a legislator will ask, when two people are having a turf battle over a technique, is how did the educational basis for this technique prepare these individuals in each of their respective educational preparatory courses. As physical therapists, we really do not have a very sound leg to stand on because of this variability. The accreditation committee is attempting to get some across-the-board standardization, but with regard to content, there appears to be no correlation from one program to another. We discussed the feasibility of having a joint task force or committee between the two Sections to attempt to analyze the educational programs and discuss the problems in teaching orthopaedics. We would then present this information to each Section and hopefully the academic arena, hoping to find possible solutions to this problem. This would also serve as a group that would have some information available to people who are now facing licensure and encroachment issues in their home states. A committee will be formed at Annual Conference in Nashville to meet and develop some procedural or policy statement regarding the future of this endeavor.

VII. Drawing for Competency Manual

Chukuka Enwemeka was the winner of the drawing.

Motion made and seconded to adjourn.

CANDIDATES FOR OFFICE

ORTHOPAEDIC SECTION 1989

SLATE OF CANDIDATES FOR THE OFFICES OF:
PRESIDENT,
VICE-PRESIDENT
AND A MEMBER OF THE NOMINATING COMMITTEE

Presented by David Apts, P.T., Chair, Nominating Committee

Dear Colleagues:

The day before the 1989 Combined Sections Meeting in Hawaii, the second candidate we had slated for the office of President withdrew, citing personal and professional obligations. The Nominating Committee had previously contacted each Orthopaedic Study Group and placed "Calls for Nominations" in the Section publications to solicit candidates for the offices to be elected. After the above withdrawal, the Nominating Committee members began soliciting candidates at the Combined Sections Meeting. Finally, a "call for nominations" from the floor was conducted at the Section Business Meeting in Hawaii. No nominations were received. The slate, as presented in this issue, was then voted upon and approved. I trust that you will understand that your Nominating Committee has worked diligently to fulfill its obligations to present the best slate of officers to you.

President
Jan K. Richardson

Vice President
Duane A. Williams
Joseph J. Vierzbicki

Nominating Committee
Helen Price
Scott M. Hasson
Roslyn Sofer
Floyd Watson

PRESIDENTIAL CANDIDATE

JAN K. RICHARDSON, P.T., Ph.D.

CANDIDATE PROFILE

Present Position: Executive Director/ Institute for Health Care and Research; Director/ School of Physical Therapy, Slippery Rock University.

Education: B.S.—Special Education, Penn State University, 1972; Certificate of Physical Therapy—University of Pennsylvania, 1973; M.S.—Administration, University of Pittsburgh, 1976; Ph.D.—Adult Psychology and Learning, University of Pittsburgh, 1983.

Key Clinical Positions: Currently, Executive Director, Institute for Health Care and Research/Slippery Rock University; Currently, Director, School of Physical Therapy/ Slippery Rock University; 1977-1987 Director, Suburban Rehabilitation Associates, Inc.; 1980-1986 Vice-President, Concept Care Inc.

Professional Activities: President, Orthopaedic Section, APTA, Inc., 1987-1989; President-Elect, Orthopaedic Section, APTA, Inc., 1986-1987; Program Committee Chair, Orthopaedic Section, APTA, Inc., 1980-1986; Committee on Sections, APTA, 1987-1990; Post Baccalaureate Entry Level Cadre, APTA, 1987-present; Chair, Southwestern District of PPTA, 1980-1982; Public Laws Chair, Southwestern District of PPTA, 1977-1980; Research Committee, Southwestern District of PPTA, 1977-1980.

Publications, Key Presentations: Journey into China, Progress Report, American Physical Therapy Association. (February 1984).; "Factors Influencing the Development of Specialization in the Profession of Physical Therapy in the United States of America". (1984); Effects of ESO on Scoliosis: Research Study with Adolescent Subjects. (1983-1984), Charles Stone, M.D., Oakland Orthopaedic Associates, Pittsburgh, Pennsylvania.; Research Review Committee, Pennsylvania Department of Health. (1983-present).; Biofeedback as a Clinical Treatment for Chondramalcia: Research Study with Adolescent Subjects. (1979-1980), William Green, M.D., Children's Hospital, Pittsburgh, Pennsylvania.; "Marketing and Public Relations for Health Professionals", Cleveland, New York. (1985) St. Louis. (May 1986) Baltimore. (May 1986); Marketing Rehabilitation Services in Nursing Homes, Geriatric Topics, January 1987 (2):46-54.; "A Successful Step Beyond Compensation: Cost Containment, Effectiveness and Success of Industrial Medical Surveillance Programs," Pittsburgh, Pennsylvania. (March 1987) Baltimore, Maryland. (March 1987) Detroit, Michigan. (May 1987).

CANDIDATE STATEMENT

The past two years I have served as the President of the Orthopaedic Section. During this period the budget of the Section has grown from $265,000 to approximately $950,000 for 1989. The strengths which I bring to the office of the Presidency include: 1) experience in understanding the role and responsibilities of the office; 2) accountability and fiscal management of a rapidly growing and balanced budget; 3) a leadership style which fosters individual growth and contributions to orthopaedics; 4) a commitment to the promotion and recognition of orthopaedic research; and 5) a determination to see the realization of board certification in orthopaedic physical therapy.

My tenure, as President, has seen a significant growth in the Section. Our Section office has grown from a space of 500 square feet and one part time assistant into an office of 3,000 square feet with four, full time staff. The budget increase has forced the Section to mature from a "Ma and Pa" operation into a

Section headquarters with extremely sophisticated computer and technical capabilities. Orthopaedic specialization was at an impasse with its future questionable. The Section is now waiting for the first board certification exam by the Orthopaedic Specialty Council (OSC) in June of this year.

For this reason and the exciting potential activities of the Section, I have agreed to be slated for the office of President.

The next three years hold exciting times and unlimited growth for the Orthopaedic Section. Board certified Orthopaedic Specialists will, hopefully, be a reality by August of 1989. However, the marketing and orientation of this "process" has only just begun. The Section has taken a role in providing an extremely comprehensive "Review of Advanced Orthopaedic Competencies." The intent of this course is not preparatory for the examination but a review service program for members. Additionally, it is the intent that those who become certified will participate and further market the process and benefits of certification to other physical therapists.

The Section has become a leader in the fostering of research for our profession with the establishment of the Stephen J. Rose Endowment for Research and our annual event of "Black Tie and Roses." This year we enhanced the recognition of scholarly research by establishing an award to honor the authors of a selected orthopaedic research publication. Encouragement, recognition and fiscal support are important activities in which the Section should continue to participate.

Likewise, the Orthopaedic Section took an aggressive stance and leadership role this year in establishing the Orthopaedic Challenge for Minority Scholarships. Prior to the involvement of the Section the accumulative funds generated totalled less than $1,000. Within one year the Section has catapulted revenues in excess of $35,000 for minority scholarships.

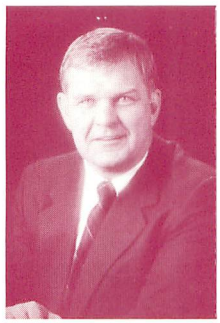
Activities such as these and new activities such as Orthopaedic Roundtables and the establishment of special interest groups within our Section for Industrial Medicine and Podiatry should be initiated.

The Orthopaedic Section is the largest of all components of the APTA and reflects a membership that constitutes one-quarter of all Association members.

It is imperative that we facilitate, energize and lead the efforts that will best promote and stimulate our entire profession in areas of practice, research and education.

Therefore, I humbly accept the nomination of President and thank you for the opportunity to once again serve you, and our Section.

VICE PRESIDENTIAL CANDIDATE
JOSEPH J. VIERZBICKI, B.S., P.T.



CANDIDATE PROFILE

Present Position: President—Valley Group Physical Therapists, Inc., a sports medicine/orthopaedic private practice in Bethlehem, Pennsylvania, for 15 years.

Education: B.S. degree from Pennsylvania State University and Certificate from the University of Pennsylvania.

Professional Activities: Formerly Nominating Committee Member for the Orthopaedic Section, presented at several mid-winter meetings, taught orthopaedic physical therapy at Hahnemann University Hospital, and taught continuing education courses across the country.

Publications, Key Presentations: "Physical Therapy in the Industrial Setting" and "Synovitis and Its Effects on Articular Cartilage" at the mid-winter meeting and "Patellofemoral Dysfunction—Iatrogenically Produced" at the Annual Meeting of the Pennsylvania Academy of Orthopaedic Surgeons.

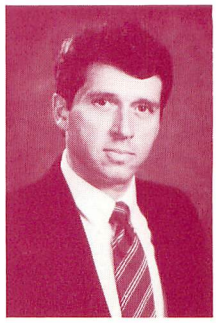
CANDIDATE STATEMENT

I am quite excited about the opportunity to serve as Vice President of the Orthopaedic Section. The tremendous growth of the Section over its years of existence is evidence of both the interest and dedication of its membership. This growth needs to continue in order to support our rapidly changing requirements as physical therapists. The medical community is demanding an ever higher level of competence and responsibility from our profession. Implementation of the competency assessment process goes a long way toward meeting those demands.

Many new and exciting treatment methods have entered our area of special interest, requiring an ever continuing commitment from the physical therapist to assimilate, comprehend and selectively apply these techniques to our patients. I feel the Section can provide a useful function as a sounding board for these new concepts—exposing them to the membership through The Journal of Orthopaedic and Sports Physical Therapy and other Publications—and inviting and supporting critical review.

I believe this is an important time for our profession—a jumping off point where we can look closely at our treatment skills and expand our body of knowledge. As Vice President I would encourage communication between membership and leadership to help all members prepare educationally and professionally for our future.

VICE PRESIDENTIAL CANDIDATE
DUANE WILLIAMS, P.T., M.A.



CANDIDATE PROFILE

Present Position: Director of Physical Therapy and Wellness, North Side Hospital, Johnson City, Tennessee.

Past Positions: Administrator at Health Focus in Rogersville, TN; Associate Professor with tenure at the University of Kentucky in Lexington, Kentucky; Physical Therapist in the neurosurgery department of the Pain Clinic at the University of Kentucky in Lexington, Kentucky; Co-director of the Orthopaedic Department at the University of Kentucky Sports Injury Clinic; Assistant Chief Physical Therapist at St. Luke's Hospital in Cedar Rapids, Iowa.

Education: M.A. degree from the Physical Therapy Thesis Program at the University of IA, 1972; B.S. and Certificate in P.T. from the University of Kansas, 1969.

Professional Activities: Presently Vice President of the Orthopaedic Section, Formerly Chair of the Nominating Committee of the Orthopaedic Section, Formerly a member of the Nominating Committee of the Orthopaedic Section, Chief Delegate for the Kentucky Chapter; Delegate for the Kentucky Chapter, Chair of the Standards of Practice for the Kentucky Chapter.

Publications, Key Presentations: "Validation and Reliability of Using the Hubbard Tank for Underwater Weighing", Physical Therapy Journal, May 1984; "Manipulation of the cervical and Lumbar Spine", videotape, Univer-

sity of Kentucky, Spring 1982; "Universal Back School", slide-tape, University of Kentucky, Spring 1981; "Examination and Mobilization of the Extremities", C.E. course workbook authored with four other faculty, Fall 1976; "The Knee: A Functional and Anatomical Compendium", Orthopaedic Section Bulletin, Fall 1976; "Mechanical Analysis of the Hip, Knee, and Ankle During a Deep Knee Bend", Thesis, University of Iowa, 1972. Duane has presented special lectures or has participated as a faculty member for continuing education programs over 75 times since 1973. Topical areas have generally been neuromusculoskeletal evaluation and treatment management, wellness, fitness, prevention and management of sports injuries, and stress management.

CANDIDATE STATEMENT

My diverse background, with emphasis in orthopaedic physical therapy since I became a physical therapist in 1970, helps me understand and integrate the areas of service, education, and research so I can better represent the Section membership. Also, ongoing involvement in the Orthopaedic Section gives me a broad perspective of the past, present, and future needs of the Section which helps me as a member of the Executive Committee for the Orthopaedic Section. Furthermore, for the last four years, more than 70% of my time has been spent in direct care of patients with orthopaedic problems. This helps me understand the needs of the grass roots clinical therapist, and in turn, as a representative of the Section membership, helps me in planning, establishing goals, and making decisions that effect all of us as a whole.

I would like to continue serving the Section membership so I can help bring to fruition the goals that have been set forth by the present Executive Committee as a result of directives from the membership. Some of these goals include: 1) development of a mechanism for certification of advanced clinical competencies in orthopaedic physical therapy; 2) assist Section members with preparing for the clinical competency examination; 3) strengthen the internal structure and foundation of the Orthopaedic Section which is needed secondarily to the rapid growth of the Section; 4) expand and strengthen the newly developed Section Leadership Training Program; 5) help support the efforts of faculty teaching orthopaedic physical therapy; 6) give support to legislation relative to orthopaedic physical therapy practice; 7) continue and expand the efforts relative to research in orthopaedic physical therapy; and, 8) put more emphasis on providing more services for the grass roots physical therapist.

If reelected as Vice President, the key issues I would like to address in addition to the general goals mentioned above would be the following: 1) strengthening the internal structure of our Section, and updating and integrating our Bylaws, Policies and Procedures, and Strategic Plan in order to build a strong foundation so we can continue the growth of our Section's activities and remain accountable to the membership; 2) continue development of a Section sponsored Leadership Training Program, not only for present officers and committee chairs, but develop a standardized generic leadership training program, culminating in a certification that will assist members in meeting the challenges of their daily administrative and managerial responsibilities and help prepare them for future roles in serving the Orthopaedic Section; 3) consider the development of a standardized certification program for physical therapy technicians working with orthopaedic physical therapists, and; 4) expand the services of the Section Office, both as a resource center for the membership, and in offering more accessible continuing education opportunities through such mediums as audio cassettes, video-tapes, and correspondence courses.

NOMINATIONS CANDIDATE

HELEN PRICE, M.S., P.T.

CANDIDATE PROFILE

Present Position: Director, Program in P.T., LSU Medical Center. Presently administrates and services LSU Physical Therapy Faculty Clinic and Northwest Rehabilitation of Louisiana.

Education: B.S. degree from the University of Florida, 1976; M.S. degree from Northwestern University, 1983; and an M.S. degree from the University of Alabama in Birmingham, 1984.

Professional Activities: Orthopaedic Section Program Committee Member; Louisiana Chapter District Chairman, Board of Directors, and Executive Committee; Ohio Chapter District Secretary, and; National Association Delegate.

Publications, Key Presentations: Publications and presentations in Orthopaedics, Clinical Education, and Burn Care. She was also a reviewer of the Orthopaedic Specialty Examination (1989).

CANDIDATE STATEMENT

The prospect of serving on the Nominating Committee is exciting and thought provoking. Three primary responsibilities are inherent as a Nominating Committee Member: 1) identify current Orthopaedic Section members who possess the attributes and creative ideas which are necessary for successful leadership; 2) foster development and growth opportunities for aspiring Section members toward leadership; and 3) recruit more Association members into the Orthopaedic Section. The Orthopaedic Section is as its members and leaders choose it to be.

I would bring to this position dynamic and positive personal interactive skills which are needed to encourage and, more importantly, support members open to service in the Orthopaedic Section. My professional experiences cross both clinical practice and academia, with employment in several states providing me the opportunity to have come in contact with many of you. This coupled with previous service in the Section and my recent involvement in reviewing test items for the Orthopaedic Specialty Exam, which many of you wrote, creates a substantial network of contacts that could be drawn from as future candidates. I most recently served on a Chapter Subcommittee to reorganize our nomination and election procedures and feel this strengthens my candidacy.

Every member has the capacity to serve the Orthopaedic Section in some way and I envision my task on the Nominating Committee to be to match each individual to that service. I would welcome the opportunity to serve on the Nominating Committee.

NOMINATIONS CANDIDATE

SCOTT M. HASSON, Ed. D., P.T.

CANDIDATE PROFILE

Present Position: Assistant Professor, Department of Physical Therapy, at the University of Texas Medical Branch, Galveston, Texas; also, a Physical Therapist III, Out-patient, John Sealy Hospital, University of Texas Medical Branch.

Past Positions: Sports Medicine Consultant, DePaul Hospital, Cheyenne, WY; Director of Exercise/Physical Therapy Department, Stress Management Institute of WY, and; Graduate Director, Adult Fitness/Phase III Cardiac Rehab Program, University of Northern Colorado.

Education: B.S. degree in Physical Therapy from the University of Texas-Medical Branch, 1987; Ed.D. degree in Exercise Physiology from the University of Northern Colorado, 1982; M.A. degree in Physical Education from California State University, Fresno, 1980, and; B.S. degree in Microbiology from California State University, Fresno, 1979.

Professional Activities: Member of The American Physical Therapy Association (APTA); Texas Chapter APTA; Orthopaedic And Cardiopulmonary Sections, APTA; American College of Sports Medicine; American Association of Cardiovascular and Pulmonary Rehabilitation, and; Arthritis Health Professions Association.

Publications, Key Presentations: Arthritis Care and Research 1: 177-182, 1988, "Effect of Iontophoretically Delivered Dexamethasone on Muscle Performance in a Rheumatoid Arthritic Joint: A Case Study"; J Sports Med Phys Fit 27: 326-334, 1987, "Blood Glucose Levels During Rest and Exercise: Influence of Fructose and Glucose Ingestion"; Perc Motor Skills 63: 1309-1310, 1986, "Absolute and Relative Leg Power in Males and Females"; Nutrition Research 6: 743-751, 1986, "Effects of Glucose Versus Fructose Ingestion on Blood Glucose Concentration During Rest and Exercise"; Comp Biochem Phys 75A: 491-495, 1983, "Respiratory Capacity of Developing Chick Red and White Skeletal Muscle", and; Perc Motor Skills 54: 778-779, 1982, "The Effect of Viewing Selected Colors on the Performance of Gross and Fine Motor Tasks".

CANDIDATE STATEMENT

I am relatively new to the field of Physical Therapy, but have been involved in sports medicine, education and research since 1982. I am a member of several Allied Health and Sports Medicine Organizations that have physical therapist members [American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), Arthritis Health Professions Association (AHPA), and American College of Sports Medicine (ACSM)]. In addition to being an active member of these organizations I have also presented nationally in all above forums, including seven presentations at APTA national meetings. I am a manuscript reviewer for Physiotherapy Canada, book reviewer for Generations, and an abstract reviewer for Physical Therapy.

I believe I have several assets that would make me a very valuable member of the nominating committee for the Orthopaedic Section. First, I have excellent research skills and have developed communications and collaborative investigations with researchers interested in Sports Medicine throughout the United States. Secondly, I have diverse clinical research interests (Arthritis, Cardiovascular and Pulmonary diseases) that allow me to be in contact with many research scientists in these areas. Although I am relatively new to the field of physical therapy, I have the research alliances/opportunities and the energy necessary to do an excellent job on this committee.

NOMINATIONS CANDIDATE

ROSLYN SOFER, B.S., P.T.

CANDIDATE PROFILE

Present Position: Self-Employed, Community Physical Therapy, Middle Village, New York; Adjunct Clinical Instructor, Health Science Center at Brooklyn and Touro College, Program in Physical Therapy.

Education: B.S. degree in Physical Therapy from Columbia University, 1964; extensive continuing education courses in Orthopaedic Manual Therapy.

Professional Activities: Co-Chairman of the New York Orthopaedic Physical Therapy Study Group, 1974-88; Orthopaedic Section member, from year of origination to present; book reviewer for The Journal of Orthopaedic and Sports Physical Therapy, 1988-present, and; member of the Program Committee in the New York District of APTA, 1975.

Publications, Key Presentations: "Mobility: Passive Orthopaedic Manual Therapy", Chapter 10, Orthopaedic and Sports Physical Therapy, ed., Gould, J., and Davies, C.V. Mosby, 1985. Taught continuing education courses on the Maitland Approach to Peripheral and Vertebral Mobilization.

CANDIDATE STATEMENT

After having been in the practice of physical therapy for the past 25 years, I have seen our profession undergo major changes in very positive directions. We have moved from being technicians who carry out prescriptions to professionals who are mandated to evaluate before treating. We have achieved or stand at the doorstep of direct access for patient care in many states. It is imperative to involve new office holders and committee members as well as to retain our more experienced leaders in order to continue to advance physical therapy legislatively, politically and professionally.

I am honored to be considered as a candidate for the office of Nominating Committee of the Orthopaedic Section. If elected to this position I will actively try to help to develop slates of candidates who will advance the cause of Orthopaedic Physical Therapy and Physical Therapy in general.

NOMINATIONS CANDIDATE

FLOYD "BO" WATSON, III, B.S., B.A., P.T.

CANDIDATE PROFILE

Present Position: Director of Industrial and Sports Medicine at the Sullivan Rehabilitation Center for Orthopaedics, and Chief Physical Therapist and Clinical Education Coordinator at the Tri-State Rehabilitation Agency.

Education: B.A. degree in Biology from the University of Tennessee in Chattanooga, 1983, and a B.S. degree in Physical Therapy from the University of Tennessee in Memphis, 1984. Continuing education: Evaluation and Treatment of Spinal Disorders, presented by Duane Saunders, Nashville, 1985; Sandy Sandlin Sports Injury Seminar presented by Chattanooga Sports Medicine Foundation,

Chattanooga, TN, 1985, 1986 and 1987; National Athletic Training Association—Southeast District, presented by N.A.T.A., Birmingham, AL, 1987 and 1988; Myofascial Release, presented by John Barnes, Atlanta, GA, 1987; Southern California Rehabilitation Lecture Series, presented by S.C.R.L.S., 1988, and; B-200 Isotechnologies Back Testing System, presented by Isotechnologies, 1988.

Professional Activities: Member of the American Physical Therapy Association and Sports Medicine Services in Chattanooga, Tennessee.

Publications, Key Presentations: "Brachial Plexus Injuries", Sportsmedicine Update; "Ultrasound", Chattanooga Trek Club Newsletter; "Modalities", Chattanooga State Community College Physical Therapy Assistant Seminar; "Brachial Plexus Injuries", National Athletic Trainers Association Fall meeting, Southeast District, 1987, and; "Head Injuries", N.A.T.A. Summer Meeting, Southeast District.

CANDIDATE STATEMENT

I am honored to be nominated for a position on the Nominating Committee.

The primary problem facing the Nominating Committee is finding individuals who will participate in the leadership of the American Physical Therapy Association. While there is a large number of members in this Association, there is poor active participation.

I believe that I represent the vast majority of physical therapists. I possess no outstanding credentials, work vigorously with patients on a day-to-day basis, struggle to be actively involved in the American Physical Therapy Association, and recognize the problems facing physical therapists and physical therapy assistants at the "grassroot" level.

As a member of the Nominating Committee, I will attempt to attract more physical therapy involvement in the leadership of the Association from everyday hard-working physical therapy assistants and physical therapists like myself. Our Association will be made stronger by a more diverse participation that by a select group of individuals who continuously govern the American Physical Therapy Association.

THE SHOULDER

Continued from page 18

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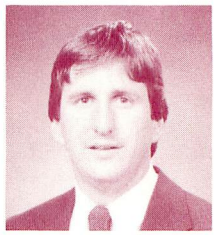

Robert P. Engle, Director, Center for Sports Physical Therapy, Berwyn, PA and Clinical Instructor, Temple University, Philadelphia, PA.

RESEARCH COMMITTEE OF THE ORTHOPAEDIC SECTION APTA, INC

CALL FOR PARTICIPANTS

RESEARCH PLATFORM AND POSTER PRESENTATIONS APTA COMBINED SECTIONS MEETING NEW ORLEANS, LOUISIANA, FEBRUARY 1-4, 1990

Persons wishing to make platform or poster presentations of research dealing with Orthopaedic topics (basic science, applied sciences and clinical sciences) are invited to submit abstracts for consideration.

LIMITATIONS:

Presenter must be a current member in good standing of the Orthopaedic Section of the APTA, Inc. or must be sponsored by a current member in good standing of the Orthopaedic Section.

Each Prospective presenter may submit no more than two abstracts. These abstracts must contain original material and may not be presented at any national meeting or published prior to the 1990 CSM.

SUBMISSION REQUIREMENTS:

Deadline for Receipt of Abstract: Abstracts must be received at the below address before 4:30 pm Eastern Standard Time on September 4, 1989. Address abstracts to:

Research Committee
Orthopaedic Section, APTA, Inc.
c/o A. Joseph Threlkeld, P.T., Ph.D.
University of Kentucky
Division of Physical Therapy
UKMC Annex 1, Room 4
Lexington, KY 40536-0079

Format for Abstracts: The abstract must be typed double-spaced on one side of a single 8½″×11″ sheet of paper. The type must be clear, dark, elite- or pica-size and produced on an electric typewriter, letter quality printer (impact or laser) or a high quality dot matrix printer with near-letter-quality type. The abstract must use standard abbreviations and should not contain subheadings, figures, tables of data or information that would identify the authors or the institution. Margins for the BODY of the text must be 1″ on all sides.

The identifying information must be single spaced in the 1″ top margin and include 1) the title in all capitalized letters; 2) the names of the author(s) with the presenter's name underlined; 3) the place where the work was done; 4) the address of the presenter enclosed in parentheses; 5) acknowledgement of any financial support for the work being presented.

In the lower left margin, type singe-spaced 1) the APTA membership number of the presenter (or name and membership number of APTA member/sponsor if the presenter is not an Orthopaedic Section member); 2) the telephone number and area code of the presenter.

In the Lower right margin, indicate the preferred mode of presentation (Platform or Poster).

Copies: Include one original and one copy of the complete abstract with all the identifying information as outlined above.

Include 10 copies of the abstract with only the title and the body of the text (eliminate all identifying information except the title).

CONTENT:

All abstracts must be reports of RESEARCH and must include in order 1) purpose or hypothesis of the study; 2) number and kind of subjects; 3) materials and methods; 4) type(s) of data analysis used; 5) summary data; 6) numerical results of statistical test(s) where appropriate; 7) conclusion; 8) clinical relevance.

EVALUATION AND SELECTION:

All abstracts are reviewed by members of the research committee without knowledge of the identity of the authors. Abstracts are selected on the basis of compliance with the content requirements, logical arrangement, intelligibility and the degree to which the information would be of benefit to the members of the Orthopaedic Section. All selections are final.

1989 MASTER CALENDAR

ORTHOPAEDIC SECTION APTA

MAY

29 Memorial Day Observed—APTA Headquarters and Orthopaedic Section office closed

JUNE

10 Exam date for Orthopaedic Specialty Exam.
10 DEADLINE: Editorial materials for the August issue of Orthopaedic Practice, due at section office.
10 8:00-10:00 a.m. Section Executive Committee Meeting 10:00-12:00 a.m. Joint Meeting Sports & Orthopaedic Executive Committees
11 10:00-12:00 a.m. Section Business Meeting
10-12 Meeting: 1989 House of Delegates, 1989 Annual Conference.
12-16 Annual Conference in Nashville, Tennessee at the Grand Ole Opry.
16 JOSPT mailing date, July issue.

JULY

4 Independence Day—APTA Headquarters and Orthopaedic Section office closed
12 Advertising for August issue of Orthopaedic Practice due to the Section office
17 JOSPT mailing date, August issue.

AUGUST

7-13 Review course for the Advanced Orthopaedic Competencies, Evanston, Illinois.
10-11 Meeting: Committee on Sections—APTA Headquarters.
17 JOSPT mailing date, September issue.

SEPTEMBER

1 DEADLINE: Application to sit for 1990 Orthopaedic Specialty Exam due to Patti Cox, ABPTS.
1 DEADLINE: All preliminary 1990 Strategic Planning Programs due to Section office.
4 Labor Day—APTA Headquarters and Orthopaedic Section office closed
4 DEADLINE: Nominations for the Steven J. Rose Endowment Award due to Section office.
10 DEADLINE: Editorial materials for the November issue of Orthopaedic Practice due to Section office.
15 DEADLINE: Foundation Research Grant Application due to APTA Headquarters.
18 JOSPT mailing date, October issue.

OCTOBER

1-7 NATIONAL PHYSICAL THERAPY WEEK—Hands-On Health.
11 DEADLINE: Advertising for November Orthopaedic Practice due to Section office
12-15 Fall Executive Committee Meeting—Section office, La Crosse, WI.
17 JOSPT mailing date, November issue.
20-22 WORKSHOP: Professional Issues Workshop—Savannah, GA.

NOVEMBER

1 DEADLINE: Nominations for APTA BoD and Nominating Committee—APTA Headquarters.
6 DEADLINE: Annual Conference Research/Theory/Special interest paper abstract due to Research Committee Chair.
10 DEADLINE: Editorial materials for January, 1990 issue of Orthopaedic Practice due to Section office.
23-24 Thanksgiving—APTA Headquarters and Section office closed.

DECEMBER

1 DEADLINE: Minority Achievement Award, Minority Initiatives Award, and Chapter Award for Minority Enhancement Applications due to APTA Headquarters.
1 DEADLINE: Marian Williams and Baethke-Carlin Award Nominations due to APTA Headquarters.
1 DEADLINE: Mary McMillan Scholarship Award Nominations due to APTA Headquarters.
1 DEADLINE: McMillan Lecture Award Nominations due to APTA Headquarters.
1 DEADLINE: Lucy Blair Service Award Nominations due to APTA Headquarters.
1 DEADLINE: 1990 Honorary Membership and Worthingham Fellows Award due to APTA Headquarters.
1 DEADLINE: 1991 Annual Conference Program input for Conference Program Committee due to APTA Headquarters.
1 DEADLINE: Excellence in Clinical Teaching Award due to APTA Headquarters.
16 DEADLINE: Advertising for January, 1990, Orthopaedic Practice due to Section office.
18 JOSPT mailing date, January, 1990, issue.
25-26 Christmas—APTA Headquarters and Section office closed.

JANUARY (1990)

31 Orthopaedic Specialty Exam, New Orleans, LA.

FEBRUARY (1990)

1 CSM, New Orleans, LA.

THE DIAGNOSIS ISSUE

Garvice Nicholson, P.T., M.S., Chair Practice Affairs Committee

The issue of diagnosis and open use of the term "diagnosis" by physical therapists is upon us. The 1988 and 1989 APTA House of Delegates has had motions regarding further study of the diagnosis issue, but has charged the APTA Board of Directors to only look at the legal aspects. Dr. Shirley Sahrmann in the November, 1988 issue of Physical Therapy spoke comprehensively about the issue. The salient points of Dr. Sahrmann's article were as follows:

1) Diagnosis is not the exclusive province of the medical profession nor does the medical diagnosis sufficiently direct physical therapy treatment.

2) Diagnosis by the physical therapist is defined as naming the primary dysfunction toward which the physical therapist directs treatment. It is a clinical diagnosis that classifies signs and symptoms obtained during a history and physical examination. It is not a differential diagnosis of disease.

3) Grouping of dysfunctions based on movement abnormalities would enhance communication among colleagues as well as other disciplines, assist in the assessment of treatment effectiveness and provide direction for research.

For some physical therapists the thought of rendering a diagnosis is discomforting. This may be due to intimidation from physicians who do not understand the intent of diagnosis by a physical therapist and regard the process as infringement. Or, some therapists who are accustomed to following prescriptions may simply be resistant to change. There is an obvious increase in responsibility and discipline required to succinctly describe the findings of a clinical examination and base one's treatment accordingly.

In orthopaedic physical therapy circles, Cyriax (a British Orthopaedic Physician) is a familiar name who has encouraged a systematic physical examination of the soft tissues based on applied anatomy. Cyriax has developed specific criteria for the diagnosis of often loosely used terms such as tendonitis, bursitis or arthritis. Physical therapy practitioners that adhere to Cyriax's philosophy would be accustomed to the specific identification of soft tissue lesions. Thus, such a process may affirm, refute or further clarify the diagnosis given by a physician who has examined the same patient. Sahrmann's description of the diagnostic process based on classification of the movement dysfunction may be quite different from that of Cyriax in many instances.

Frequently, the physical therapist is presented a global diagnosis such as degenerative joint disease and the task at hand is to clarify the manifestations of that disease, i.e. the patient's signs and symptoms. Maitland's metaphor, "the permeable brick wall" is a useful one to put into the proper perspective the separation that exists between theoretical/speculative information and that of actual clinical presentation:

"The liaison between the clinical and theoretical compartments is vital for the growth of useful knowledge. The clinician may speculate and hypothesize, while the theoretical practitioner is often too far removed from the clinical situation to assist him. It can also be harmful when the clinician believes his hypotheses dogmatically. There is considerable space for error in the theoretical compartment whereas there can be no errors in the clinical compartment, other than those caused by the examiner's lack of skill. Seldom do examination findings belie the patient's true physical condition. For a theoretical statement to be correct, it must fit the clinical situation. If it does not fit, it is the theoretical statement that must be wrong because the clinical presentation cannot be wrong.

This separating of one's mental processes into two linked compartments is commonly referred to metaphorically as 'the permeable brick wall', the dividing line between the theoretical/speculative' compartment and the 'clinical presentation' compartment being 'the brick wall'. It is not a solid wall; it has many openings to allow thoughts to flow from one compartment to the other".

Theoretical/speculative	Clinical presentation
Diagnostic title	History, Symptoms and Signs

(From Maitland GD: Vertebral Manipulation 5th Edition)

In the legislative arena we have a "two edged sword" in dealing with the diagnosis issue. Opponents of direct access for physical therapy services say, if we claim not to diagnose, we then have no basis for our treatment. However, if we attempt to explain diagnosis by a physical therapist, we are accused of encroachment. It would appear that we have no choice but to become well versed and less uncomfortable about discussing diagnosis.

In summary, diagnosis must be dealt with assertively yet judiciously. We should pursue classification of patients' signs and symptoms for the reasons that have been stated. However, this laborious process of classification must be conducted in a most open minded fashion if it is to be useful to the masses of practitioners.

ORTHOPAEDIC SECTION, APTA, INC.
PUBLIC RELATIONS AND AUDIOVISUAL MATERIALS

Order Form

The items listed below are available for sale or rent through the Orthopaedic Section office:

_____ Orthopaedic Physical Therapy logo pins. (Section Members $10.00, non-members $20.00)

_____ Coffee mugs. $5.50 each or $20 per set of four (mugs can be sold in two of each style). Two styles: (indicate which style, "X")
_____ 1) Orthopaedic Physical Therapy definition, or
_____ 2) . . . the touch of class.
(non-members $8.00 each or $30 for a set of four)

_____ Brass paper weight of Section logo. (Section members $25 each, non-members $40).

_____ Tape measure with the Section logo (six foot cloth tape), (Section members $4, non-members $6) ($3.75 each in quantities of ten (10) or more, for Section members only)

_____ Orthopaedic Physical Therapy brochures (Section members $20 per 100 brochures, non-Section APTA members $35 per 100 brochures)

_____ Orthopaedic Physical Therapy Terminology booklets (Section members $2 each, non-members $4) ($1.75 each for orders of 20 or more, for Section members only)

_____ Orthopaedic Physical Therapy competencies. ($45 Section members, $65 Educational Institutions, $95 non-members)

_____ Orthopaedic Section, APTA, Inc. membership certificate. This attractive, personalized certificate is now available. The cost is $10 for the certificate. Subsequent yearly update stickers will be available at a cost of $2 each. (Not available to non-Section members.) Please print below exactly how you would like your name and degree to appear.

_____ Prints of *Bulletin* covers (9¾″ × 10″) Section members $15 each or $100 for the set of nine. (Pictured on the reverse of this sheet). (non-Section members $25 each or $150 for the set of nine)

_____ Display booths ($50.00 per use plus return shipping). The Section has recently purchased two new, easy to use, table-top model booths.

_____ Orthopaedic Physical Therapy Slide/Tape Program (Section members $25.00 per use plus return shipping, purchase price $120.00). Also available in ½″ VHS video format. (not pictured) (non-Section members $50 per use plus return shipping, not available for sale to non-members)

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Please add $2.50 per order for postage and handling

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La Crosse, WI 54601
608/784-0910, FAX 608/784-3350

Signature _____

VISA/MasterCard (circle one) # _____ Exp.Date _____

(note: minimum charge order $20) APTA # _____

(Contact the Section office for details) (3/1/89)

Orthopaedic Section Public Relations Materials for sale through the Section Office (see page 36 for information).

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Daniel Dyrek, P.T., M.S., Orthopaedic-Sports Specialization Coordinator, or Alan M. Jette, P.T., Ph.D., Program Director,
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ORTHOPAEDIC STUDY GROUPS

In an attempt to identify for section members study groups which are functioning in their area, the following list of persons concerned with study groups is published. It is our hope to develop a network of study groups to facilitate acquisition of the vast amount of knowledge encompassed in the area of orthopaedics.

ALABAMA

Tuscaloosa Area Orthopaedic Study Group

James A. Korte, Coordinator
c/o Department of Rehabilitation
DCH Regional Medical Center
809 University Boulevard E
Tuscaloosa, AL 35403
(205) 759-7157

ARIZONA

The Phoenix Manual Therapy Study Group
c/o Arizona Physical Therapy Professionals
Timothy O. Fearon
6135 North Seventh Street
Phoenix, AZ 85014
(602) 230-9871

CALIFORNIA

Los Angeles Orthopaedic Study Group
Lyman Kennedy, Chairman
4144 North Gayle Street
Orange, CA 92665
(714) 638-9309 (Home)
(714) 847-1367 (Work)

Manual Therapy Study Group
Alice L. McCleary
1321 Cary Way
San Diego, CA 92109
(619) 488-6130

Northern California Orthopaedic Study Group
Richard Fike, MS, PT
4737 El Camino Avenue
Carmichael, CA 95608
(916) 487-3473

San Luis Obispo Orthopaedic Study Group
Ross Dover
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Rice Lake, WI 54868
(715) 234-2273

STEP

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INTENDED AUDIENCE

Academic and Clinical Faculty in Physical Therapy
Physical Therapy Clinicians

PLANNING COMMITTEE

Susan Attermeir, MACT
Suzann Campbell, PhD
Barbara Connolly, EdD
Pamela Duncan, MACT
Susan Effgen, PhD
Susan Harris, PhD
Susan Herdman, PhD
Carolyn Heriza, PhD
Harry Knecht, EdD
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Ann VanSant, PhD
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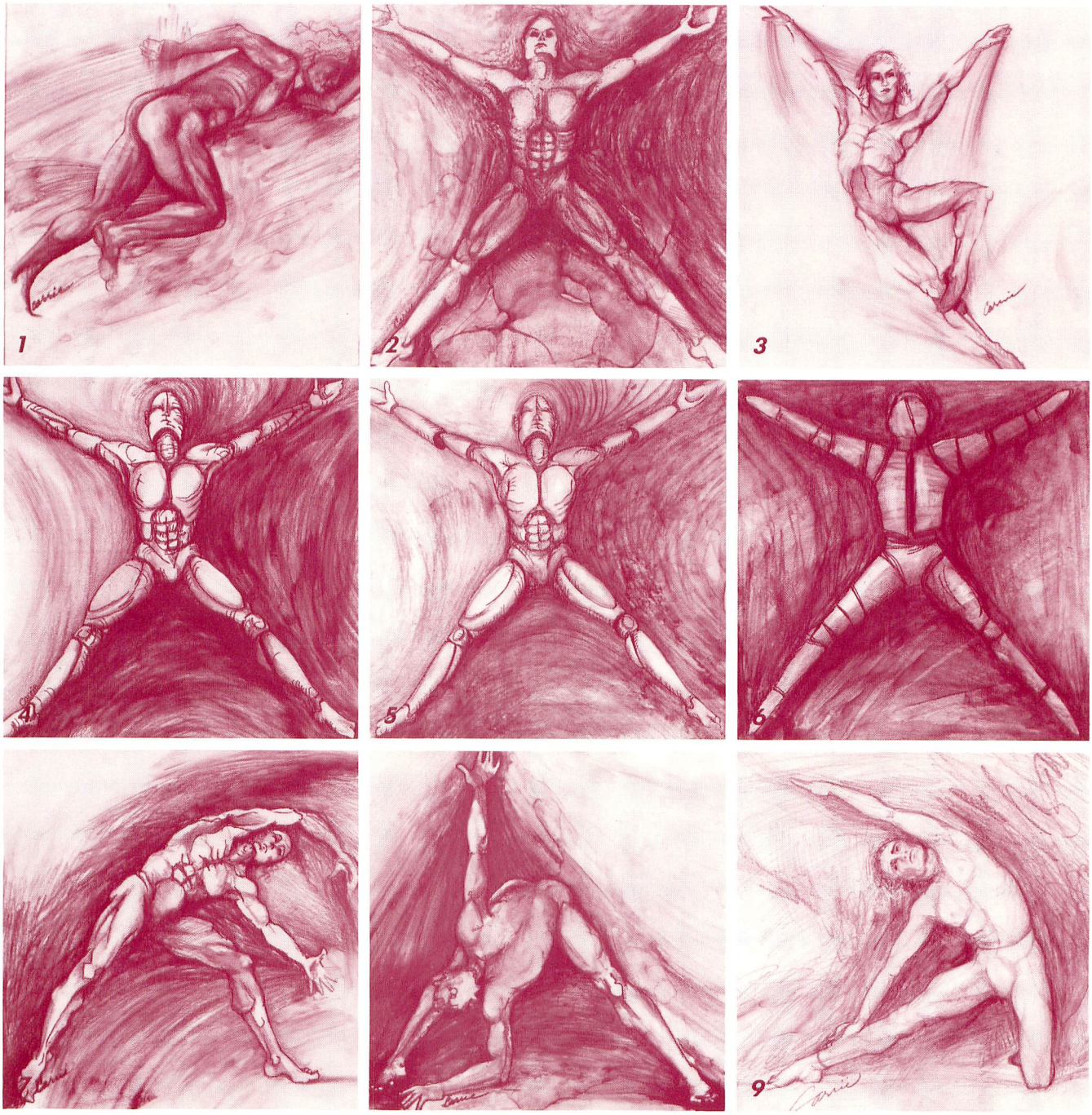
POST GRADUATE PROGRAMS

ORTHOPAEDIC PHYSICAL THERAPY

Name of School/Program	Contact
1. Northwestern University	Judith Falconer, Ph.D. Director of Graduate Studies Northwestern University Medical School Programs in Physical Therapy 345 East Superior Street, Room 1323 Chicago, Illinois 60611 Phone: (312) 649-8160
2. MGH Institute of Health Professions	Alan Jette, Ph.D., Program Director Daniel Dyrek, M.S., Orthopaedic Specialization Coordinator 15 River Street Boston, Massachusetts 02108-3402 Phone: (617) 726-8000
3. Emory University	Dr. Pamela A. Catlin, Director Division of Physical Therapy Emory University School of Medicine 2040 Ridgewood Drive, NE Atlanta, Georgia 30322
4. Northeastern University	Jane Toot, Ph.D.,P.T. Northeastern University Department of Physical Therapy 360 Huntington Avenue Boston, Massachusetts 02115
5. University of Pittsburgh	Karen S. Maloney, M.S., P.T. Physical Therapy Department University of Pittsburgh 101 Pennsylvania Hall Pittsburgh, PA 15261 Phone: (412) 624-8938
6. University of Kentucky	Dean P. Currier, Ph.D. Department of Physical Therapy, HP 500 University of Kentucky Medical Center Lexington, Kentucky 40536 Phone: (606) 233-5941
7. University of Minnesota	Louis R. Amundsen Course in Physical Therapy Box 388, Mayo Building University of Minnesota Health Sciences Minneapolis, Minnesota 54555 Phone: (612) 376-4680
8. Kaiser-Permanente Medical Center	Orthopaedic Physical Therapy Program and Clinical Residency Kaiser-Permanente Medical Center 27400 Hesperian Boulevard Hayward, California 94545 Phone: (415) 784-5092

Name of School/Program	Conact
9. University of Southern California	Helen Hislop Department of Physical Therapy University of Southern California 12933 Erickson Avenue Downey, California 90242 Phone: (213) 923-5591
10. Medical College of Virginia	Virginia Commonwealth University Department of Physical Therapy P.O. Box 224 MCV Station Richmond, Virginia 23298 Phone: (804) 786-0234
11. Georgia State University	Carolynn Crutchfield, Ed.D.,P.T. Director of Graduate Studies Department of Physical Therapy Georgia State University Atlanta, Georgia 30303 Phone: (404) 658-3075
12. Washington University	Marybeth Brown, Ph.D. Washington University Medical Center P. O. Box 8083 660 South Euclid Avenue St. Louis, MIssouri 63110 Phone: (314) 362-3670
13. Temple University	Katherine F. Shepard, Ph.D. Director of Graduate Studies Department of Physical Therapy 3307 North Broad Street Philadelphia, Pennsylvania 19140
14. Long Island University	Lydia Wingate, Ph.D.,Director Division of Physical Therapy Long Island University Brooklyn Campus University Plaza Brooklyn, New York 11201 Phone: (718) 403-1063
14. University of Alabama at Birmingham	Marilyn R. Gossman, P.T.,Ph.D. Director Division of Physical Therapy University of Alabama at Birmingham 1714—9th Avenue South Birmingham, Alabama 35294 Phone: (205) 934-3566
15. Hahnemann University	Neil Pratt, Ph.D., P.T. Curriculum Coordinator of Orthopaedics Program in Physical Therapy Hahnemann University Mail Stop 502 201 North 15th Street Philadelphia, PA (215) 448-1750
16. University of Indianapolis	Ann Clawson, M.S., P.T. Coordinator, M.H.S. Program University of Indianapolis 1400 E. Hanna Avenue Indianapolis, IN 46227 Phone: (317) 788-3500



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MINIMAL CRITERIA FOR PHYSICAL THERAPISTS TO SIT FOR THE SPECIALIST CERTIFICATION EXAMINATION

The following is the Minimal Criteria document generated by the Orthopaedic Specialty Council. Included are the requirements to be achieved in order that you may apply to sit for the orthopaedic specialty examination. The first examination is scheduled for June 9, 1989 at the Opryland Hotel in Nashville, Tennessee. The deadline to apply for this June exam date was January 1, 1989. Please check further Section publications for the announcement of the next scheduled exam date. Just as a reminder, the Section is offering "overview of orthopaedics" courses twice this year; this February in Phoenix and August in Chicago. Please see the full-page advertisement in this issue for additional details.

INTRODUCTION

Individuals wishing to sit for the specialist certification examination must meet specific criteria. The criteria, which are fully explained in the following sections include documentation of orthopaedic practice; competence in teaching in a variety of situations; the ability to read and critically interpret scientific literature; and documentation of character. In addition, applicants are required to participated in a field test dealing with patient satisfaction. The results of the surveys will not be used in determining an applicant's ability to sit for the examination however.

PRACTICE

An applicant must submit notarized evidence of a minimum of five (5) full-time years (10,400 patient contact hours) of practice in the area of orthopaedic physical therapy. These hours must have been completed within the last ten years. Six thousand two hundred forty (6,240) of these practice hours (3 years full-time practice) must include DIRECT PATIENT CARE, 50% of which occurred within the last three years and 5% of which occurred within the last year. Only those patient care hours involving the physical therapy management of musculoskeletal conditions will be considered.

TEACHING

The applicant must demonstrate evidence of involvement in the development and implementation of educational programs for any or all of the following: fellow staff members, other health professionals, students, patients, families, and/or caretakers. You should refer to the teaching competency located in the *Orthopaedic Physical Therapy Specialty Competencies.* In your description, the following should be addressed:

A. Parameters/characteristics that determine that the learner was ready to learn. Describe the attitudinal and educational barriers to learning (such as level of formal education, symptom magnification which must be considered when planning to teach. Discuss means to overcome any identified barriers.
B. Specific topical areas to be taught in the areas of knowledge, behaviors or skills, and attitudes.
C. Specific goals to be met by the learner including who will learn, what behavior/knowledge/attitude will be exhibited, and to what extent. These statements form the specific learning objectives. Therefore, they must be ordered to reflect sequencing of the learning experience and priorities.
D. The necessary environment for learning (classroom, clinic, time of day, etc.). Describe the specific methods used (lecture, discussion, demonstration, etc.). List the equipment and/or materials used (weights, hand-outs, slides). Describe follow-up planned for the learner.
E. Techniques used to enhance the learner's motivation (reinforcement, extrinsic rewards, interpersonal approaches, physical environment).
F. A plan designed to test the effectiveness of the learning experience. The measures of the original and modified plan (if there was one) must include outcome measures of teaching (e.g. levels of knowledge or skills attained, changed performance from pre- and post-testing, follow-up measures of compliance, satisfaction). Rationale for each measure must be included.

INTERPRETATION OF SCIENTIFIC LITERATURE AND THE RESEARCH PROCESS

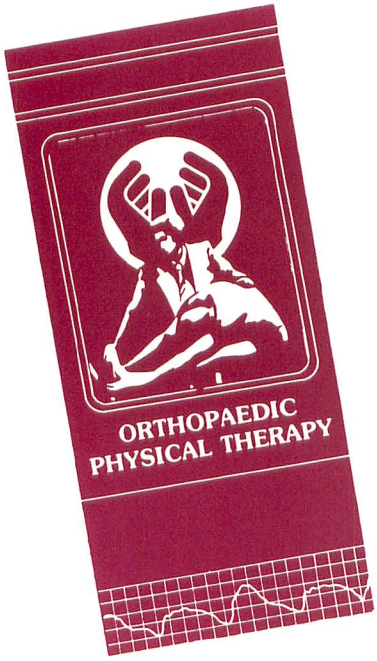
The applicant must demonstrate competence in the critical analysis of Orthopaedic Physical Therapy literature through the completion of an assigned analysis of a research article related to the field of orthopaedic physical therapy.

You should refer to the research competency located in *Orthopaedic Physical Therapy Specialty Competencies.* The critical analysis of the assigned article should address the following:

1. Purpose of the study or report.
2. Research hypothesis.
3. Null hypothesis and directionality.
4. Dependent and independent variables.
5. Type of research.
6. Type of research design.
7. Method of assignment to experimental groups.
8. Appropriateness of methods to measure the dependent variables (reliability and validity).
9. Appropriateness of methods to manipulate the independent/extraneous variables (internal and external validity).
10. Type of statistical tests used to analyze the data.
11. Appropriateness of the statistical analysis.
12. Whether author's conclusions are justified.
13. Relevance of research or publication to orthopaedic physical therapy practice.
14. Usefulness of research or publication to a specific clinical practice (external validity).

NOW Available for Orthopaedic Section Members

Informational brochures on Orthopaedic Physical Therapy



These brochures define orthopaedic physical therapy, explain about examination and orthopaedic treatment, and patient education.

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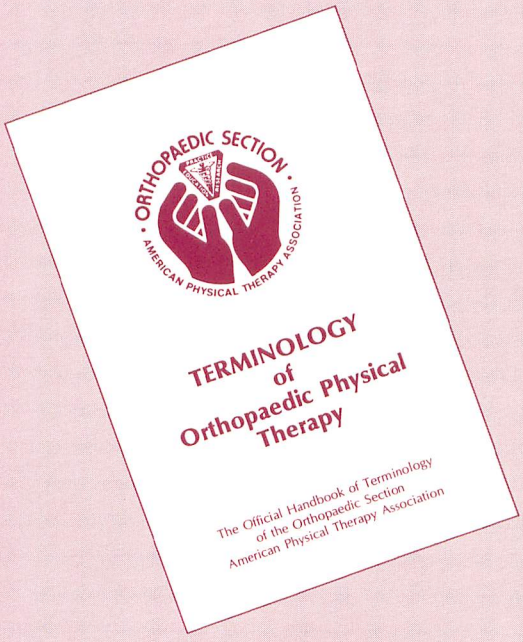

The Orthopaedic Section APTA, in an attempt to standardize the usage of terms associated with the practice of Orthopaedic Physical Therapy has compiled a 14 page listing of terms and their definitions. This booklet is a valuable resource to clinicians and students alike to familiarize themselves with the Terminology in use today.

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— ANNOUNCING —

The next Orthopaedic Specialization Examination will be **January 31, 1990** at the New Orleans Hilton Riverside in New Orleans, Louisiana. The deadline for application is **September 1, 1989.** The application process requires a lengthy time committment so you are urged to begin this process as soon as possible. For further information on the minimal criteria and the application booklet please contact either the Orthopaedic Section office (800/658-9022) or Patti Cox at the American Board of Physical Therapy Specialties (ABPTS) office (800/999-APTA).