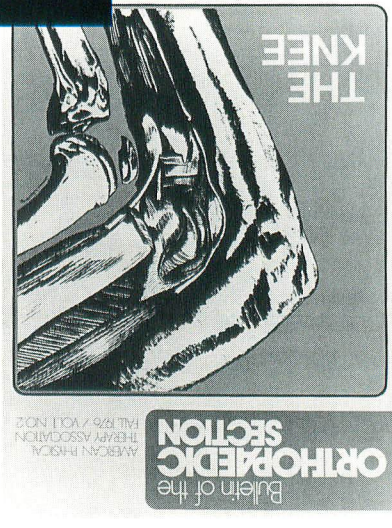
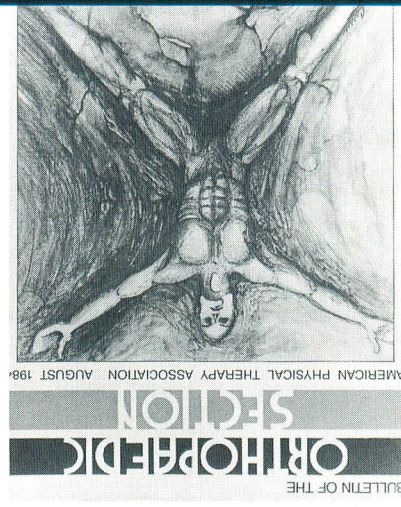
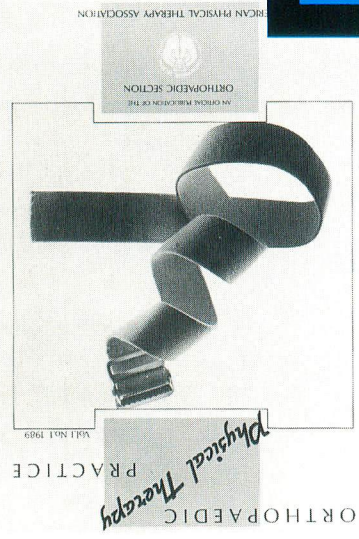


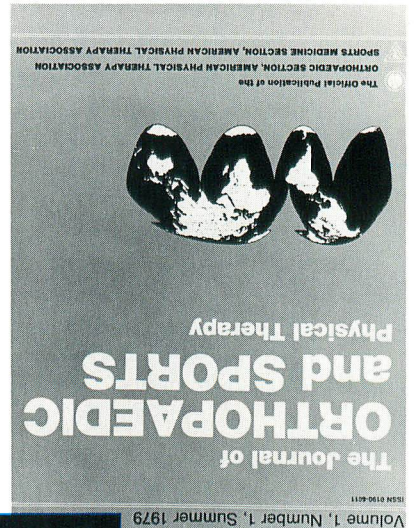
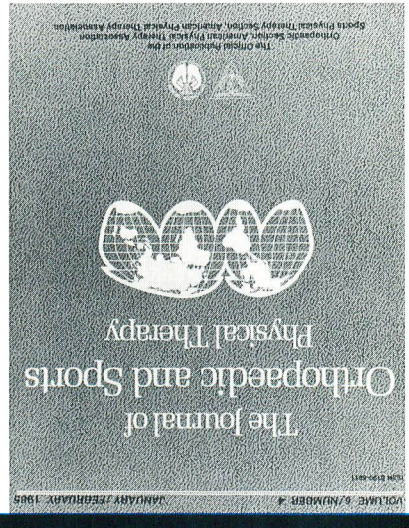
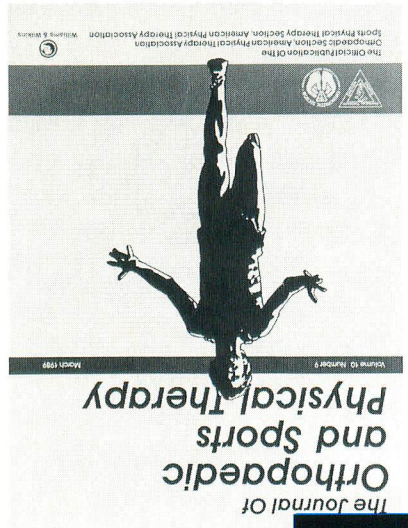
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Vol. 1, No. 4, 1989

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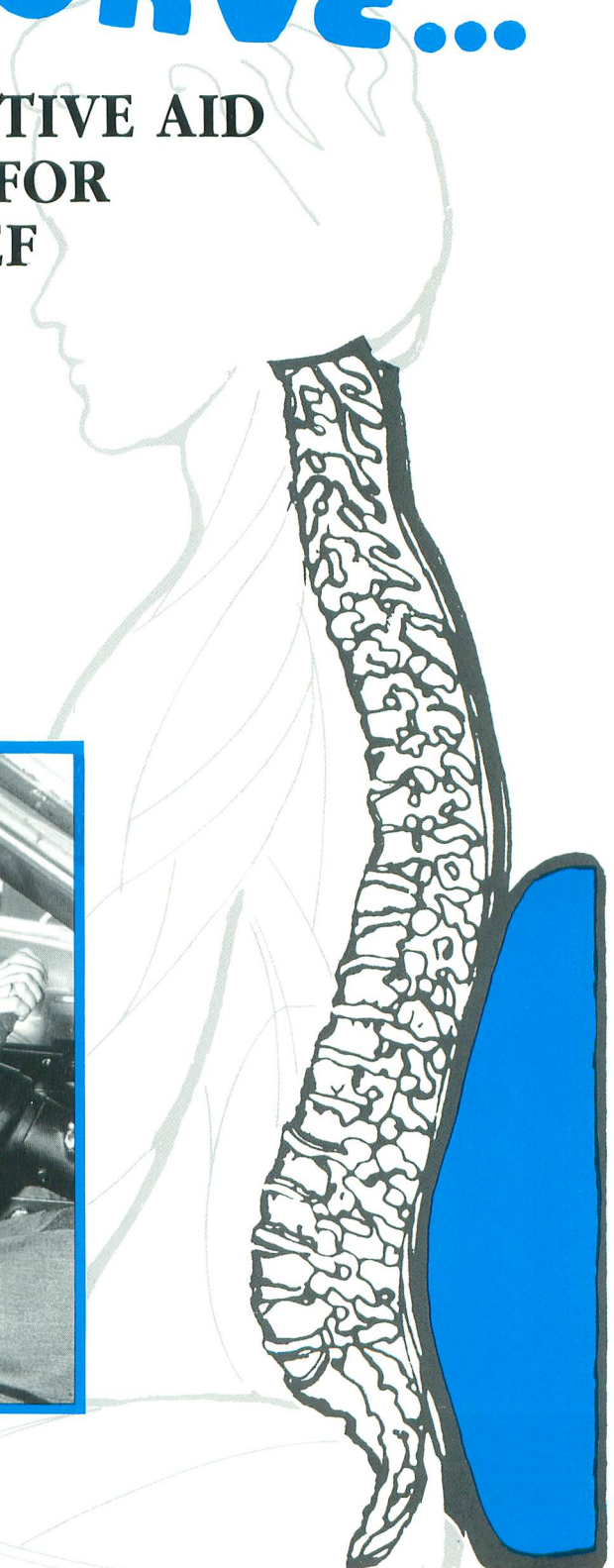
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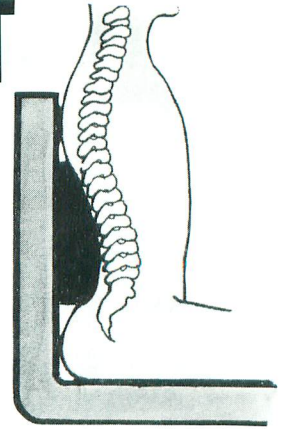
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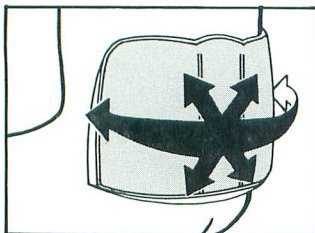


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ABOUT THE COVER

The Orthopaedic Section is celebrating 15 years of service to the profession. Section Publications have evolved as the Section has grown.

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EDITORS' VIEWPOINT

CHRISTINE SAUDEK • JAMES GOULD



Andy Sarvas

This issue of Orthopaedic Physical Therapy Practice honors some very important people who have been instrumental in the growth of our Section over the past 15 years. And when we mention growth, we mean not only growth in numbers but growth in the sense of growing up. The Section as a whole has matured and become well respected in all circles of physical therapists. We at the editorial office cannot help but feel the growth of the publications has been a major factor in the expansion of the Section. The publications have been responsible for the dissemination of information to the membership regarding decisions of the executive committee, activities of the committees, future meetings etc. But perhaps more important to our membership, since from the attendance at the business meetings one would not assume that they are all that interested in the functionings of the Section, is the dissemination of information that will directly influence

each member's practice, i.e. clinical and research oriented articles. These articles appear in the *Journal of Orthopaedic and Sports Physical Therapy* and *Orthopaedic Physical Therapy Practice*. Both started out as newsletters. The *Journal* has become one of the leading publications in the field of physical therapy. *Orthopaedic Practice* is just beginning but we predict it will grow rapidly. *Orthopaedic Practice* evolved from *The Bulletin* because members expressed a need for a medium to publish more clinically oriented articles. We, the editors feel there is great potential for this publication. However, we need the support of the membership. Our budget is limited now and will not grow unless the membership expresses their desire and need for such a publication. We have many ideas for the design and material that would enhance future issues but we will be unable to execute them without the proper funding. This funding is approved by the Executive Committee which is the governing body of the Section and represents the membership.

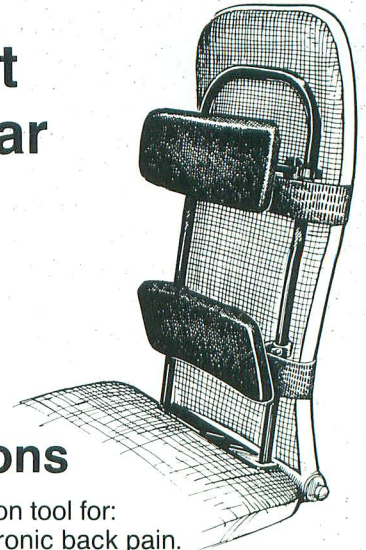
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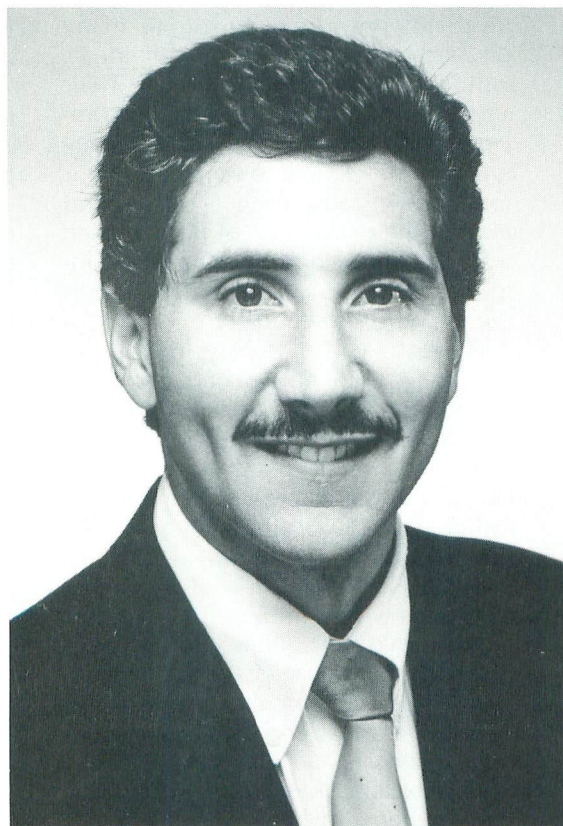
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DEDICATION

When you read the heading dedication, I wonder what your first thoughts will be? Will you think that this issue was written in tribute to a particular person? Will you think that it will be set aside as a special issue devoted to a particular subject or cause? Or will you think of the commitment that you have made to your professional lives. This is not a trick question! All answers are correct and are part of the definition of the word dedication. This issue of Orthopaedic Practice is devoted to the Section's 15th anniversary. Contained herein are interviews with past and present officers, historical highlights, and lots of Section tidbits. We hope that you will take the time to review some of your own professional history. This issue is a tribute to all those who have worked so hard for the past fifteen years to make the Section what it is today, officers, committee members, Section staff, and

every dues-paying member. We also pay tribute to visionaries like Stanley V. Paris, who did so much for the advancement of physical therapy and Steven J. Rose for whom the Section's research award is named. And dedication is something with which we all should be proud to live. We have dedicated our professional lives to the care of others. The Section is dedicated, through the efforts of you—its members—to the advancement of Orthopaedic Physical Therapy. I hope that you enjoy this special issue of Orthopaedic Practice. See you at CSM in New Orleans.

Jonathan M. Cooperman, MS, PT
Chair, Public Relations Committee
Guest Editor



PRESIDENT'S MESSAGE

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



As we begin our second 15 years of existence and service to Orthopaedic Physical Therapy, one must stop and reflect on the magnitude of growth that has occurred within the Section. Fifteen years ago the mission of the Section was to "provide a forum whereby persons concerned with orthopaedic physical therapy could work to improve the quality of patient care in the field of practice." (Bylaws: Orthopaedic Section, APTA, 1975).

Today, the breadth and depth of the mission has evolved to include the advancement and enhancement of practice, education and research in orthopaedic physical therapy. The basic philosophy, spirit and drive of our organization has been reflected by our relative achievements and our most important belief is our respect for the individual.

But what does the future hold for the Section and our members?

"The dogmas of the quiet past are inadequate for the present and future. As our circumstances are new, we must think anew, and act anew."
Abraham Lincoln.

The 70's are behind us, we have moved beyond the level of orthopaedics as a craft. The 80's has brought us to the level of a true profession. What we need for the future is a commitment to further elevate orthopaedics to the level of science enveloped by art and humanness.

Our Section founders were effective managers who pushed and directed fundamental changes in attitudes and values. To survive in the future our Section must have intuitive leaders. Our Section must continue to function as a leader within our profession. Leaders pull and expect. Tenacity, stamina, clarity and passion will be the hallmarks. For we are in a world where exponential

adaptive change is essential and what is new today is obsolete tomorrow. If our Section and its leaders are strong, open and resilient, magnanimous contributions and greatness lie ahead.

The Orthopaedic Section is entering the 90's with the realization of a long awaited dream, the recognition of the first Board Certified Orthopaedic Physical Therapists in the United States. With this process comes the heightened advancement and respect for those who wish to dedicate their efforts and lives to the provision of quality of care. These individuals will foster practice and advanced clinical expertise as a viable career ladder. Their certified credentials will allow others whose interest lie in providing direct care to be respected at a level not previously known to many physical therapists. These individuals will serve as our new role models. Their strength is the mastery of clinical competence as we know it today. But they must not be content to remain here for long. They must further define and elevate their standards of performance and lead clinical orthopaedic practice into the 21st century providing an example for others to emulate.

The future will hold marvelous opportunities for us in the area of orthopaedic research. We will no longer be satisfied and pacified by techniques and procedures which have not been substantiated by the basic sciences. In this arena, orthopaedic physical therapy will lead the world. Our organization and members will establish goals of expectation that will be unrivaled by all other nations. We will define the scope of practice in Orthopaedics and cultivate it from an isolated touch to a comprehensive process that encompasses evaluation, diagnosis and intervention based upon substantiated science and a global understanding of humanity.

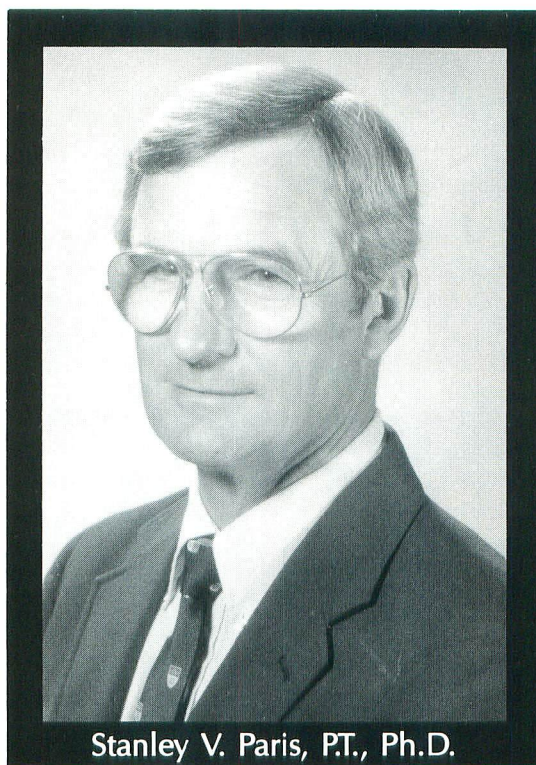
The new century will see the Orthopaedic Section and its members in a

renaissance of scholarly knowledge. Higher education and continuing education will be but a basic step on the continuum of professional development. Orthopaedic physical therapy will no longer be a career but a life commitment. Its boundaries will expand the life cycle of our patients and we will therefore need new channels for the processing of information. Self learning and formal education will be complimented by the advances in high technology. Computerization will incorporate high touch as we will see ourselves maneuvering three dimensional spinal columns and extremities on visual terminals. The Section will prioritize education as a goal for the future. Programs, conferences and self study will be made available at all levels of knowledge. We will strive for accessibility and affordability so that all of our members will have the opportunity to participate. The advantages and benefits of membership in the Orthopaedic Section will be obvious to all.

Indeed, the future holds great potential, but we must stretch our goals. We must catalyze and enhance our strengths and the strengths of our members. We must sculpture a vision and plan boldly to achieve our goals. We must expect much and accept nothing less than excellence. The future is there, it is ours for the taking. We must not let the moment pass without grasping the opportunity and leaving our legacy on it for others to follow.

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

PARIS FOUNDER'S AWARD



Stanley V. Paris, PT., Ph.D.

On the celebration of its 15th anniversary, the Orthopaedic Section is initiating its highest honor, The Paris Founder's Award for Distinguished Service, named after Stanley V. Paris, Ph.D., PT. who founded the Orthopaedic Section in 1974 and was its first president (1974-1977).

Stanley V. Paris was born on August 13, 1937 in Dunedin, New Zealand. He attended Otago Boys' High School in Dunedin where he gained University entrance. Stanley attended the University of Otago and graduated from New Zealand School of Physiotherapy in 1958. In his final year of school Stanley was awarded the Alison Alan Award for Excellence in Manual Therapy and this led to the awarding of an overseas Spinal Study Grant from the New Zealand Workers Compensation Board to study the treatment of backache in Europe and North America in 1960-1961. Stanley practiced in Dunedin, New Zealand from 1962 until 1966 when he immigrated to the United States. His first position in the United States was as a senior staff physical therapist at Massachusetts General Hospital. While in that position Stanley lectured to the physical therapy students and served as a consultant to the Institute of Rehabilitation Medicine in New York City. In 1968, Stanley went on his own and became president of a private practice, Rehabilitation Services, Inc., in Boston. Stanley, since 1968, has been involved in many ventures including but not limited to President of the Atlantic Back Clinic; President of the Institute of Graduate Health Sciences; President of Deepdene Clinic, Hamilton, Bermuda; Clinical Specialist; and consultant to various hospitals and clinics around the U.S.

In 1974, Stanley held a pre-conference organizational meeting of therapists prior to the 1974 Annual APTA Meeting held in conjunction with the World Confederation of Physical

Therapy. At that meeting the Section was founded as well as the recognition of the International Federation of Manipulative Therapists (IFOMT) as the first sub-group of the World Confederation. Stanley served as the Orthopaedic Section's first president from 1974-1977. In 1978, Stanley became the President of the International Federation of Manipulative Therapists, a position which he held until 1984. In 1979, Stanley returned to school and received his Ph.D. in 1984 from Union Graduate School with his Ph.D. work done on the functional anatomy of the lumbar spine especially the neuroanatomy of the facet joints and discs of the lumbar spine.

Stanley has been an advocate of clinical specialization and assertive professional practice. In 1987, he received an award from the American Board of Physical Therapy Specialties for his efforts in the development of clinical specialization.

Stanley is presently the President of the Institute of Graduate Physical Therapy based out of Atlanta, Georgia which has been licensed to offer graduate credit toward a Masters of Science Degree in Orthopaedic Physical Therapy. Dr. Paris resides in St. Augustine, Florida with his wife, Catherine Patla, PT. In addition to Stanley's academic activities he maintains an active clinical practice. Having sailed twice across the Atlantic Ocean Stanley continues to be active and accomplished outside of his profession. He also has competed in the World Championship Ironman Triathlon in Hawaii and in 1986 he twice swam the English Channel.

Stanley has been an active supporter of the Orthopaedic Section and its activities and the Section will honor Stanley by bestowing on him the Paris Founder's Award for Distinguished Service.

LETTERS



I am writing to congratulate you and the members of the Orthopaedic Section on the Section's upcoming 15th Anniversary celebration.

Many of your readers, including Florence Kendall, know that I consider therapeutic intervention with musculoskeletal systems the nucleus of our profession. In no way does that statement denigrate the contributions made by physical therapists to other body systems; however, musculoskeletal problem identification and resolution constitute the "common denominator" of our profession.

When your Section became a reality in 1974, that event was the culmination of the efforts of many, outstanding orthopaedic colleagues. I would not presume to list their names for fear of excluding some.

The current membership size of your Section certainly tends to confirm my postulation of orthopaedic practice being a common denominator with which our entire profession can identify. Your Section has produced a multiplicity of outstanding leaders, all of whom have

made lasting contributions to the profession of physical therapy.

I am sure that my comments echo the opinions of many colleagues when I congratulate the Orthopaedic Section on its 15th Anniversary, and express my sincere expectation that such Section leadership and productivity will benefit our profession for many years to come.

Most sincerely,
Jane S. Mathews President APTA

LETTERS



The Orthopaedic Section became a reality when final approval was granted by the House of Delegates at the June 1974 APTA Annual Conference in Montreal. The Section's first organizational meeting was held the next day. One hundred physical therapists from 26 states attended. Stanley V. Paris was elected as the Section's first chair and dues were set at \$10. Today, fifteen years later, the Orthopaedic Section can boast a membership that is over 10,000 strong. This increase in membership, however, is only one of many successful accomplishments destined to follow that first meeting in Montreal.

When I was asked to submit an article for this 15th anniversary issue, I tried to come up with a unique perspective to bring to the commemoration. As Director of Component Relations at APTA, I have the opportunity to work closely with officers from the chapters, sections, and the affiliate assembly. I observe firsthand as components enrich the association, each bringing their own specialties and regional interests to the attention of "National". I realized that what I could

offer the Orthopaedic Section on the occasion of this anniversary was an objective reflection on its many achievements of the last 15 years.

Many of the Orthopaedic Section's achievements stem from a strong organizational base. It was one of the first to hire executive personnel and to use computers in its every day operations. From the beginning, the Section has worked from an intricate strategic plan, setting attainable goals aimed at increasing membership, being responsive to members' needs, and contributing to the profession and the association.

The Orthopaedic Section has been committed to leadership training from the onset. An early planning report states, "our growth is dependent upon the development of future leaders." Many outstanding national leaders have emerged from the Section. Last fall, I visited the Section's office in Wisconsin and attended the fall Executive Committee Meeting and officers' planning session. The dedication of the officers and committee chairs was apparent. As plans for future activities unfolded, the enthusiasm grew. To ensure the Section's continued growth, they evaluated the Section's current structure and their own duties to determine if each officer's talents were being used in the best way to meet their members' needs.

Such sensitivity to members' needs is responsible in large part for an active and interested membership. Membership surveys play an important role in determining member needs. For example, you may recall Jim Gould's editorial in the September issue of *The Journal of Orthopaedic and Sports Physical Therapy* which shared the results of a *Journal* readership survey. Those results are being used to make the *Journal* a better and more responsive publication; *Orthopaedic Physical Therapy Practice*, the

new Section clinical publication is the direct result of comments from the survey.

The Orthopaedic Section's commitment is not only to its members but also to the profession and the association as well. Two goals set in 1977 were: "To offer educational opportunities to advance our knowledge in the field of orthopaedics" and "to establish a certification program for orthopaedic physical therapy." The first goal was met when the Section was again on the cutting edge by drafting position papers on education at the graduate level. The second goal was achieved this spring when the Section administered the first orthopaedic specialist exam.

The Section's dedication to the profession of physical therapy and to the APTA is perhaps best exemplified by its continuing contributions and involvement with APTA's Minority Affairs Activities and with the Foundation for Physical Therapy. The "Black Tie and Roses" reception at the Combined Sections Meeting honors some of the Section's most illustrious members. This year's 15th Anniversary dinner will continue the support for the Minority Scholarship Fund of the Foundation for Physical Therapy. This year's gala, featuring Nancy Wilson in private concert, honors not only Stanley V. Paris with the establishment of the Paris Founder's Award, and all past presidents, but 15 years of growth and service to the profession.

I extend my sincerest congratulations to the Orthopaedic Section for a decade and a half of achievements and my best wishes for continued success in the 1990's and beyond.

Sharon Meehan
Director, Component Relations APTA

A CONVERSATION WITH SOME OF THE SECTION'S MOST INFLUENTIAL FIGURES

Karen Piegorsch, PT; Jonathan M. Cooperman, MS, PT



STANLEY PARIS

Stanley Paris was the Section's first Chairman serving from 1974 until 1977. He helped to write the original Section bylaws with Dan Jones. He was also the first Chairman of the International Federation of Manipulative Therapy (IFOMT).

OP: Has the mission of the Section changed since you were Chairman? If so, how?

PARIS: I don't think the mission is clear any longer. Initially, it was to bring together people of specialized interest in orthopaedics and to provide them with a forum and a means of communication. That has been achieved. We also have clinical specialization and although it does not test for practical skills, it is in fact now in place and does cover the field of orthopaedics.

I think at this time, the Section needs to make a major effort in re-defining what its mission is and how it will carry that out. It also needs to look carefully at the scope of orthopaedics and the role of manual therapy. The Section seems to neglect manual therapy.

OP: What direction do you think the Section should take in the next 15 years?

PARIS: Firstly, it should continue with doing an excellent job in communication. Next, I would like to see it do more to stimulate research in orthopaedics. I don't mean research at the entry level which is increasingly being done in a shorter period of time now that the entry level is a Masters, but stimulate research by recognized orthopaedic physical therapists who will lead others by assisting them to attain their goals. Research needs to be constructed in a pyramid where the goal is to define an objective and direct a team approach to achieve it over a period of some years. Short, one or two semester research projects will never achieve the advance that we need in orthopaedics. While it is fine to support the Foundation for Physical Therapy, we should have a more active division within our own Section, supporting orthopaedic research by those who know the field and are willing to become involved and who have shown they can produce the goods with publishable material.

Next, I think the Section must define its mission. We are the largest Section because most therapists are interested in orthopaedics, but what do we do for them since very few come to our meetings and our only connection with them is through our excellent publications. What do they want from us, and what can we suggest that they might look at for us to do?

As I've said, we need to define our practice. This politically could be very tricky, but there is a need to define some of the very basic terms that we use in our teachings and in our writings and reports to intermediaries. Dictionaries do it all the time, but dictionaries, be they for the public or medical use, have not helped us in defining such words as manipulation. We need to have a committee or task force that would seek to do this and get full approval for such definitions as

their variances, and how they should be referred to. Increasingly, we are receiving articles in manual therapy and other fields from various countries and in reviewing these articles, the disparity between the use of common terms makes the reading rather difficult.

There needs to be an increased emphasis on ethics. This matter concerns me greatly as I see that as we in physical therapy become more independent, we might be looking at the wrong role models in medicine from whom to take our lead. The issues of POPTS and joint ventures is one that pervades the whole profession, particularly all forms of private practice. As a clinical section rather than a business section, I feel that it is appropriate for us to come out with a code of ethics that we expect of our members in their daily practice. Such a code which could be promoted to undergraduate therapists would be extremely helpful to those as they enter the professional aspects of their lives in forming a framework for these difficult issues. I know the House of Delegates has wrestled with such issues, but it is more hamstrung by its sheer democratic size than is the Executive Committee of the Section and what it can propose to its members for their review and sanctioning at a Section meeting. I think we can be a very positive force here and one that would be good for the future of physical therapy.

OP: What would you like to be remembered for with regard to the Section?

PARIS: I was its Founding Chairman at the meetings in both Chicago and Montreal, and then I was First Chairman of the Section. Also, I began in 1972 pushing for specialization and with the help of the Section we gained a task force that did make a difference, and now we have the boards which our Section more than any other pushed for. We incidentally had two members on that task force, myself and Sandy Burkart.



SANDY BURKART

Sandy served as Section President from 1977-1979.

OP: During your term of office, what were the major issues surrounding Orthopaedic Physical Therapy?

BURKART: Creating an organization from the fragmented philosophies and directions that existed, and creating an identity and power for the organization, from which it could work for its membership.

OP: Has the mission of the Section changed since you were President? If so, how?

BURKART: The Section has evolved such that it now has a great administrative structure, and is better able to focus on and direct the needs of its membership. The hardest thing was the transition from a loose organization to the beginning of laying down an administrative structure. We were naive, as is any developing organization, and yet growth has been tremendous during the past decade.

OP: What direction do you think the Section should take in the next 15 years?

BURKART: Make a real effort to develop uniform standards for quality continuing education, and take an interest in helping clinicians become specialists.

Generate revenue through continuing education, to support research.

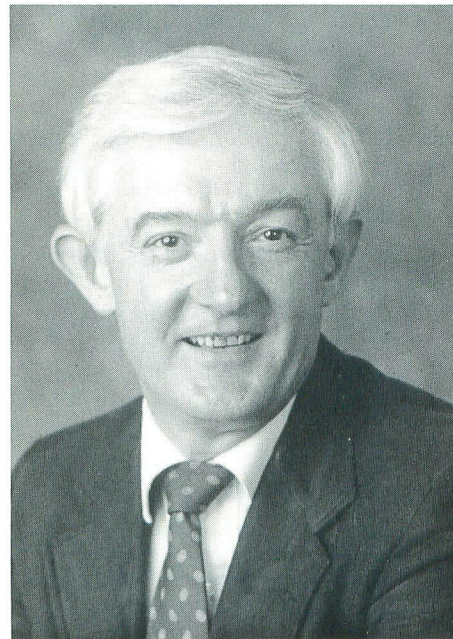
Make a concerted effort to train and certify teachers, so that there are more teachers available than just the "gurus." We need to train American PTs who can establish national education patterns, for manual therapy in particular. If we can do this, the money spent on such continuing education will be brought back into this country, and can be channeled into use for research.

Direct research toward developing a neuro-mechanical model for evaluation and treatment of the musculoskeletal system. Our future lies in establishing what motor learning and re-learning are all about.

Direct research and clinical practice toward the problems associated with the chronic pain population. Physical therapists' need to learn to use and to quantify special behavioral techniques as adjuncts to mechanically oriented therapeutic interventions.

OP: For what would you like to be remembered with regard to the Section?

BURKART: That I was instrumental in three things: establishing the practice of looking at Orthopaedic Physical Therapy in a broad sense rather than exclusively as manual therapy; being part of the initial group which pushed specialization; seeking methods for establishing a journal.



DAN JONES

Dan was Section Chairman from 1979-1981. He helped produce the first Section brochure.

OP: What do you think were the major accomplishments of the Section during your term?

JONES: Becoming the largest Section and remaining closely affiliated with AP- TA. Several sections wanted to pull out of the mid-winter conference. I felt as President that one of our strengths was our association with a national organization, and that we should work out our differences through compromise.

OP: What were the major issues surrounding Orthopaedic Physical Therapy during your term of office?

JONES: Specialization, continuing education and education in PT schools, the relationship with APTA, JOSPT, and research.

OP: What direction do you think the Section should take in the next 15 years.

JONES: Certify more specialists. Teach more manual therapy in the basic programs since so much of physical therapy is done on spine patients. We need more clinically relevant research which can back up why we do what we do, and show that it is really effective.

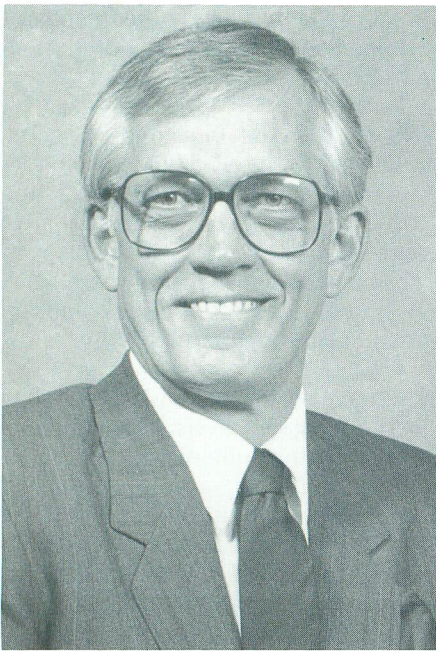
OP: Has the mission of the Section changed since you were President? If so, how?

JONES: It has progressed, but many of the same issues are addressed. However, there has been an increased emphasis on advancement and sophistication.

OP: What would you like to be remembered for with regard to the Section?

JONES: Helping to get the Section started, good continuous education for members, progress toward specialization (competencies) and keeping a close affiliation with our parent organization (APTA). Don Wortley, Stan Paris, and I wrote the original Bylaws.

1976—February, First APTA sponsored joint mobilization course, preceding the pilot-based first coordinated Sections meeting, Washington Hilton Hotel, Washington, DC.



DUANE SAUNDERS

Duane was the Section's Chairman from 1981-1983. He also served as Vice Chairman and Program Chair.

OP: Has the mission of the Section changed since you were President? If so, how?

SAUNDERS: More toward keeping the members informed.

OP: What do you think were the major accomplishments of the Section during your term?

SAUNDERS: 1) The Journal of Orthopaedic and Sports Physical Therapy, 2) Monetary support for the Foundation, 3) Initial work on specialization, 4) Continuing Education programs.

OP: What would you like to be remembered for with regard to the Section?

SAUNDERS: That I welcomed all points of view and that the Section wasn't dominated by only manual therapists. That it became the Orthopaedic Section, not the manual therapy section, which is what some wanted it to be in those days.

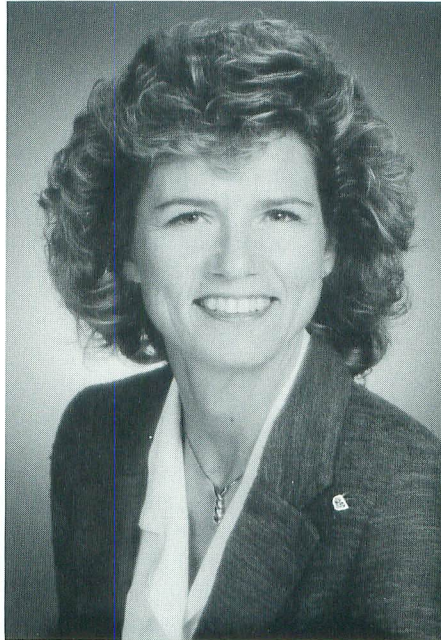
OP: Has the mission of the Section changed since you were Chairman?

SAUNDERS: It's more toward keeping the members informed. During my administration the emphasis was on the Journal. Currently, the Journal is well

established and the Section is improving the level of its Bulletin.

OP: What direction do you think the Section should take in the next fifteen years?

SAUNDERS: Provide political direction [with regard to] insurance reimbursement, practice without referral, and continuing education. Provide more continuing education in the form of journal articles and seminars.



CAROLYN WADSWORTH

Carolyn was the Section President from 1983-1985. She has also served the Section as Secretary and Chair of the Education Committee.

OP: Has the mission of the Section changed since you were President? If so, how?

WADSWORTH: Through the addition of hired staff, the Section no longer relies totally on the volunteer services of its officers for all business transactions. A larger portion of the budget is donated to the foundation.

OP: What direction do you think the Section should take in the next 15 years?

WADSWORTH: It is especially important that the Section work closely with academic institutions to ensure high entry-level preparation of students in orthopaedics. Workshops and curricula models for instructors could be provided to enhance teaching skills and course content. Informal "information ex-

change" sessions could be held at national meetings to allow instructors to interact. Extended clinical residency programs could be made available to students.

OP: What do you think were the major accomplishments of the Section during your term?

WADSWORTH: Major Section accomplishments during my term included: development of a working Policies and Procedures Manual; refinement of the Strategic Planning Programs used by officers and 10 committees; initiation of a fall Executive Committee meeting; expansion of Section publications to six issues of *JOSPT* and four issues of the *Bulletin*; and also a facelift for the *Bulletin*, with the utilization of "cover art" and colored ink; Section provision of a 10th Anniversary Awards Luncheon, honoring past chairmen and *JOSPT* editors; initiation of appreciation plaques and certificates to former officers and committee chairmen.

OP: What would you like to be remembered for with regard to the Section?

WADSWORTH: For contributing to a higher level of Section organization and maximally efficient leadership. Our administration worked toward improved function of an entirely volunteer establishment, a sound committee structure, and greater involvement of the membership. We accomplished this through the initiation of absentee balloting, a Section Master Calendar, updated Policies and Procedures Manual, and a Public Relations booth, and tapes for sale or rent.

1975—Orthopaedic Section membership totaled 720 members.

1976—Summer, *Bulletin of the Orthopaedic Section*, Vol. 1, No. 1, James A. Gould, Editor.

1979—May, *The first issue of the Journal of Orthopaedic and Sports Physical Therapy (JOSPT)*, James A. Gould, Editor



ROBERT DEUSINGER

Bob was the Section's President from 1985-1987. He was also the Section Secretary from 1982-1984.

OP: What direction do you think the Section should take in the next 15 years?

DEUSINGER: I would like to see the Orthopaedic and Sports Sections merge into one section. We seem to have a proliferation of sections, which results in splintered efforts and resources, when together we have the potential to accomplish more. The Canadian system of Divisions would serve as a good model for us, and indeed the combination of the Orthopaedic and Sports Sections could serve as a role model for other American sections.

Promote the establishment of an Institute of Orthopaedic Physical Therapy for clinical training, clinical research, and training of teachers. Far into the future this could lead to us building a facility

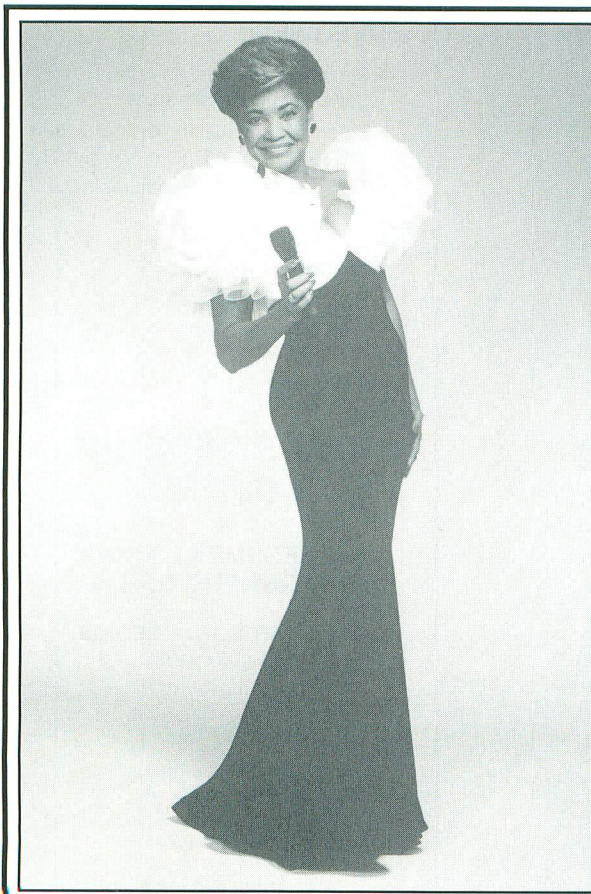
to house the institute such as done recently by the American College of Sports Medicine [who] successfully rallied a huge fundraising effort to establish a physical entity.

OP: What do you think were the major accomplishments of the Section during your term?

DEUSINGER: Internal restructuring and organization, enhanced financial stability, a mission with a vision toward the future through long range planning and leadership training.

OP: What would you like to be remembered for with regard to the Section?

DEUSINGER: An idea facilitator who subtly guided others to investigate new and different ideas and directions, many of which have been implemented over the past few years.



ORTHOPAEDIC SECTION

15th Year Celebration

- ENTERTAINMENT: NANCY WILSON in private concert
- DINNER: Reception & Sumptuous Feast
- RECOGNITION: Orthopaedic Section Anniversary and Past Presidents
- PROCEEDS will be donated to the Minority Scholarship Fund of the Foundation for Physical Therapy
- COST for this entire gala evening is \$100 per person or \$1,000 per table. Corporate sponsorship of \$5,000 includes a table for 10.

Call the Orthopaedic Section at 1-800-326-9056 for Reservations

THE FIRST NORTH AMERICAN ORTHOPAEDIC SYMPOSIUM

ANATOMY & FUNCTION JOINT CONCEPTS

MAY 12 & 13, 1990

WESTIN HOTEL, OTTAWA, CANADA

ORGANIZED BY:

NATIONAL CAPITAL UNIT, ORTHOPAEDIC DIVISION,
CANADIAN PHYSIOTHERAPY ASSOCIATION
in association with

THE ORTHOPAEDIC SECTION,
AMERICAN PHYSICAL THERAPY ASSOCIATION

OFFICIAL AIRLINE: AIR CANADA



SYMPOSIUM

KEYNOTE SPEAKER:

LANCE TWOMEY, Ph.d.

School of Physiotherapy, Curtin University of Technology
Perth, Australia

Co-Author of *CLINICAL ANATOMY of the LUMBAR SPINE*

TENTATIVE PROGRAM

Wendy Aspinall, M.H.Sc, M.C.P.A.: The Lumbar Facet Syndrome -
Facts and Fiction

Cliff Fowler, M.C.P.A., C.O.M.P.: Ligament Testing in the Lumbar
Spine (Ilio-Lumbar Ligament)

Carol Kennedy, M.C.P.A., C.O.M.P.: Clinical Stress Testing of
Cranio-Vertebral Ligaments

Diane Lee, M.C.P.A., C.O.M.P.: The Clinical Implications of age related
changes in the sacro-iliac joint.

Susan Mercer, M.Sc.: Ligaments of The Cervical Spine (current
research on lower cervical spine)

Dr. M. Panjabi, Ph D.: Functional Anatomy of the Alar Ligaments,
Coupling Patterns in the Lumbar Spine

Erl Pettman, M.C.P.A., C.O.M.P.: Assessment and Treatment of
Segmental Spinal Instabilities

Dr. Gary Schmidt, P.T., Ph D: Current Research on Trunk Muscles,
Title to be confirmed.

Dr. Lance Twomey, Ph D: The Effect of Trauma and of Aging on the
Joints of the Cervical Spine

Ricki Yamada, MacKenzie Institute, C.O.M.P.: The Centralization
Phenomenon: Its use in Assessment and Predicting Outcome

LINDA RYAN
36 SHEARER CRESCENT
KANATA, ONTARIO, CANADA
K2L 3C6
(613)721-2000 EXT. 3704
FAX (613)224-9685

FOR MORE INFORMATION CONTACT:

PRE-SYMPOSIUM COURSE:

CLINICAL ANATOMY of the
CERVICAL and LUMBAR SPINE
by Lance Twomey

May 10 & 11, 1990

OVERVIEW

- Structures and function of cervical and lumbar spine
- Differences between cervical and lumbar spine
- Current research - biomechanics and pathology
- Effects of aging and severe trauma
- Rationale of physical therapy
- Enrolment: LIMITED

POST-SYMPOSIUM COURSE:

ASSESSMENT AND MANAGEMENT OF THE

CRANIO-VERTEBRAL REGION
May 14, 15, & 16, 1990

by CLIFF FOWLER and
ERL PETTMAN

LOCATION:

The Rehabilitation Centre

ENROLMENT: Limited

PREREQUISITES:

Cdn: E2 V2

USA: Intermediate Level

Manual Therapy

Stanley Paris: S2 S3

Fowler/Pettman:

Level II Spinal

THE FIRST NORTH AMERICAN ORTHOPAEDIC SYMPOSIUM

May 12 & 13, 1990 - Westin Hotel - Ottawa, Canada

REGISTRATION FORM

NAME: Dr. Mr. Ms.
LAST FIRST

ADDRESS:

PHONE: (Home) (Office).....

FAX:

PROFESSION: C.P.A./A.P.T.A. Number

MEMBER OF Orthopaedic Division/Section of C.P.A./A.P.T.A. Yes No.

Registration for Symposium

Includes Opening Reception (Evening May 11) and Dinner Dance (May 12, 1990)		
	Until March 5, 1990	After March 5, 1990
Orthopaedic Members	\$235.00	\$260.00
C.P.A./A.P.T.A., (non-ortho)	\$260.00	\$285.00
Non C.P.A./A.P.T.A.	\$335.00	\$360.00
Students	\$120.00	\$135.00
Please indicate if you will be attending:		
Opening Reception (included in registration fee)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Dinner/Dance (included in registration fee)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Would you like extra tickets to Dinner/Dance	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Tickets: \$40.00/person	Cdn.\$.....

PRE-SYMPOSIUM COURSE		
CLINICAL ANATOMY OF THE CERVICAL AND LUMBAR SPINE by <i>Lance Twomey</i>		
Orthopaedic Members	\$175.00	May 10 & 11 1990
C.P.A./A.P.T.A., (non ortho)	\$200.00	
Non C.P.A./A.P.T.A.	\$250.00	
Students	\$100.00	
Enrolment Limited 125		Cdn. \$.....

POST-SYMPOSIUM COURSE		
ASSESSMENT & MANAGEMENT OF THE CRANIO - VERTEBRAL REGION by <i>Cliff Fowler and Erl Pettman</i>		
Orthopaedic Members	\$350.00	May 14, 15, & 16 1990
C.P.A./A.P.T.A., (non ortho)	\$375.00	
Non C.P.A./A.P.T.A.	\$450.00	
Enrolment Limited 30		Cdn. \$.....

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 ALL COURSE FEES ARE IN CANADIAN (Cdn.) Dollars. Please send Cdn. Funds.
Cancellation Policy: A Cancellation fee of \$20.00 will be charged. No refunds after April 25, 1990.
 Please send completed registration with full payment to: **Conference Coll Inc., 1138 Sherman Dr., Ottawa, Ont., Canada. K2C 2M4. FAX (613)224-9685**

ACCOMMODATION: Book early as course coincides with 'Festival of Spring'

LORD ELGIN - 1-800-267-4298 Single: \$70.00 - Double: \$76.00 <i>Reservation cut-off: April 19, 1990</i>	WESTIN - 1-613-560-7000 Single: \$125.00 - Double: \$125.00 <i>Reservation cut-off: April 9, 1990</i>
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TRAVEL - Air Canada Convention Hot Line - 1-800-361-7585; Quote Convention File Number

The Evolution of Orthopaedic Section Publications

James A. Gould, M.S., P.T. — Editor

In this issue of *Orthopaedic Practice* I have been asked to write about the evolution of the Orthopaedic Section publications, where we have come from and where I see us going. The *Journal of Orthopaedic and Sports Physical Therapy* began as a newsletter created by Stanley V. Paris before the formation of the Ortho-

their article published within it. The name needed to have dignity and yet not overstate its position. Since the publication, in my mind, was nowhere near a

not appealing and therefore, developed a cover which was a large illustration with the articles starting on the inside pages. Since the budget was low I drew the covers for the first three years. To obtain articles I pressed every contact I had in the profession, which were few. I feel very grateful to the first authors who helped develop the "Bulletin". Among those "pioneers" are Debra Wille, Linda Vahlsing, Duane Williams, Lamont Smith, John Wadsworth, Gary Smidt, James Robinson, Linda Vanhoesen, Paul Niemuth, Marge Ferstl, Dick Erhard and Rick Bowling. With an initial run of 700 copies, 500 for members and 200 copies to circulate we started to grow in size and stature.

Parallel to *The Bulletin of the Orthopaedic Section*, George J. Davies, MEd. PT, ATC, accepted the editorship of the Sports Medicine Section newsletter. After the initial issue, George and I worked together to better both publications individually and cooperatively. Since we had offices which were next to each other it was not difficult for George and me to get together. To show compatibility of both Sections and to reduce expenses to both Sections we produced one issue, the "Christmas" issue, as a combined Orthopaedic Section and Sports Medicine Section publication. (Fig. 4) In 1978, our third year of publication, our numbers had grown to be 3,000 members in the Orthopaedic and about 1,500 members in the Sports Medicine Section. At this

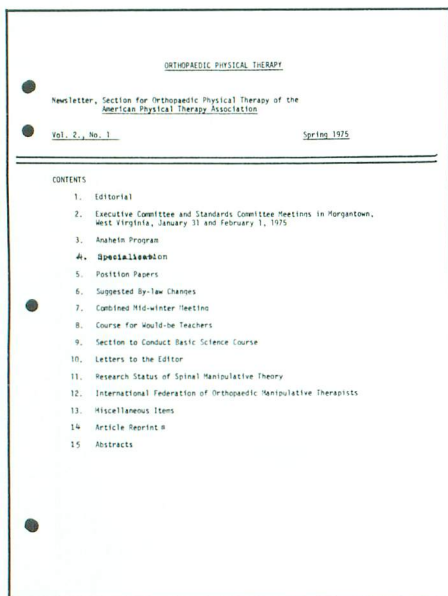


Fig. 1

paedic Section (Section) in 1974. Stanley had developed the newsletter (Fig. 1) and printed the first commercially typeset issue (Fig. 2) when he decided to find someone who would take on the editorship and develop the publication into a Journal.

At the first midwinter Combined Sections Meeting, held in Washington, D.C. in 1976, Stanley, being unusually friendly, asked John Petronus and myself to dinner at a seafood restaurant in Washington. After plying us with food and drink, Stanley androitly discussed the newsletter and before I knew it I had accepted the position.

With a mission to develop a publication which could evolve into a full Journal within 5 years, I evaluated the one commercially produced issue of the newsletter and formulated the decisions which set us on a course to today. The primary philosophy which I developed was to produce a publication which would attract quality articles including masters or doctoral theses. To do this we needed a name and a look which would make an author pleased to say they had

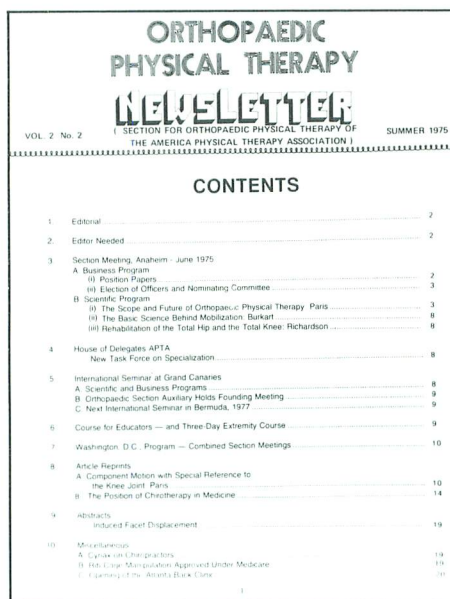


Fig. 2

"Journal" status I decided that it could be respectable enough to be called a "Bulletin". I felt that *The Bulletin of the Orthopaedic Section* would look good

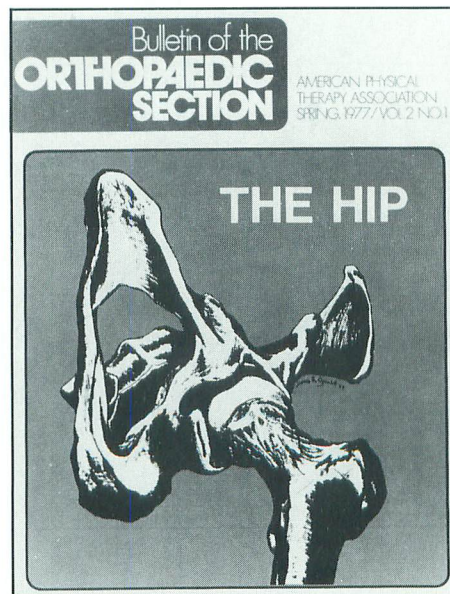


Fig. 3

on a resume and not overstate the publications. (Fig. 3)

Another decision which I made was to create a "look" which would attract readers. I felt that "copy" on the cover was



Fig. 4

point the Orthopaedic Section became the largest Section and the Sports Section was third largest after the Private Practice Section which had 2,100 members. The "Bulletins" had grown in acceptance to the point where Gary Smidt stated to me that he would allow his graduate students to submit their theses to the *Bulletin* as a vehicle for publication. We were at the verge of "Journal" status. With prodding from Stanley Paris, I contacted a number of publishers regarding their interest in publishing a journal. We found out quickly that 3,000 alone or 4,500 combined members for many publishing companies was very small; we finally found a friendly publisher in Williams and Wilkins.

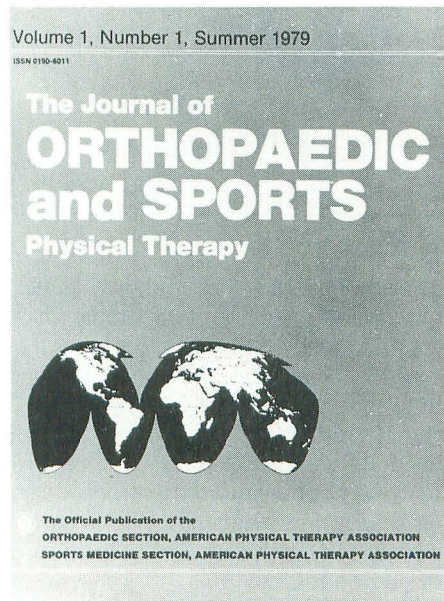


Fig. 5

Williams and Wilkins was interested but only if we would combine Section publications for the numbers and manuscript base. So George and I went to our Sections to gain their endorsement of *The Journal of Orthopaedic and Sports Physical Therapy*, a joint publication of the Orthopaedic and Sports Medicine Sections of the American Physical Therapy Association. We were successful in gaining the acceptance of the proposal from both Sections and set about the year long process of developing the *Journal*. We were fortunate enough to have Alma Wills as our account executive and senior editor. Alma was instrumental in her guidance as we progressed through the initial phases of *Journal* development. (As a note of appreciation: Alma Wills has been a role model for me, in her tenure with Williams and Wilkins. Alma has obtained her MBA and evolved to become the President of the Journal Division of the Williams and Wilkins Company. Despite her rise she has remained a close friend and valued consultant in the many

situations which have presented themselves over the past 15 years. Thank you Alma!

To form the Editorial Board for the *Journal* we thought of all the "biggies" we could think of and wrote letters on our new stationary. We expected about a 30% acceptance rate but were pleasantly surprised when about 98% said "yes". A notable "no" to our invitation was Dr. James Cyriax who stated emphatically that "If Stanley Paris is on the board I won't be". Well, Stanley had already accepted so—no Cyriax. Stanley had not been liked by everyone.

In 1979, after a year of development we produced the first issue of *The Journal of Orthopaedic and Sports Physical Therapy* or the "green" journal, a quarterly publication. (Fig. 5) The cover design was inspired by a suggestion from Sandy Burkart to have the symbol for the journal be the "world" to give direction to its becoming an international forum. An interesting interjection at this point is that when Chris Saudek, *JOSPT's* Managing Editor, was traveling in Japan in 1983 she spoke to a Japanese therapist who when asked about his opinion on *JOSPT* commented that Japan did not exist in our world. Sure enough, no Japan was present (Fig. 6) so we added Japan (Fig. 7) to the world in 1984.

In 1982, I felt the *Journal* needed to have a look of more stature but did not want to make a drastic change until the *Journal* was 10 years old. So I redesigned the cover using the same color but updating the typestyle and adding a leather-texture look. (Fig. 8) In 1983 we went from a quarterly publication to a bi-monthly publication. At that point I remember saying something to the extent of it will be a cold day n hell before we go monthly to Alma Wills and sure enough we did in 1986 (it was a very cold year).

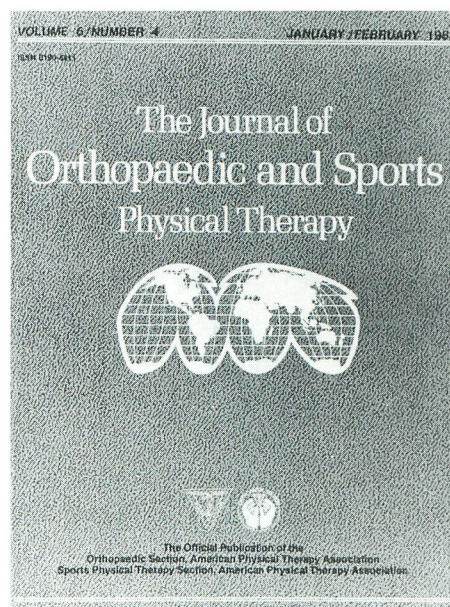


Fig. 8

In January of 1989 we initiated a major design change for *JOSPT*. (Fig. 9) The *Journal* was 10 years old and had garnered its place in physical therapy literature. *JOSPT* is the third largest publication in physical therapy—17,000 subscribers in 53 countries. The *Journal* was stable, now I wanted to have it look more contemporary without being garish. To achieve it we redesigned the cover, as well as changed the type face and page layout.



Fig. 6



Fig. 7

To assist in optical scanner assimilation the reference superscripts were brought down and the numbers placed on line with the text. Borders and header pieces

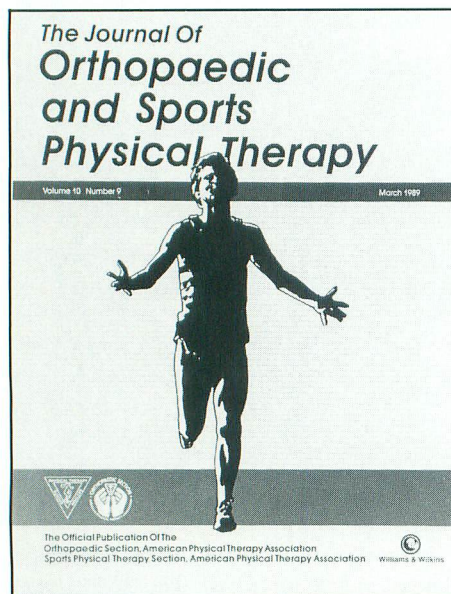


Fig. 9

were developed. After 18 months the cover colors will change to demarcate annual volumes but the cover will remain the same format.

The Journal of Orthopaedic and Sports Physical Therapy replaced *The Bulletin of the Orthopaedic Section* in 1979. When *JOSPT* first came out it contained both articles and section news from both Sections. As we evolved and attempted to gain admission to *Indicus Medicus*, the Section related materials were removed. (Another note—we have submitted *JOSPT* to *Indicus Medicus* four times and have been unsuccessful in our attempts.) The void was filled by the reinstatement of *The Bulletin of the Orthopaedic Section* (Fig. 10) in 1983 through the efforts of Jerry Fogel, then the Vice President of the Orthopaedic Section. The *Bulletin* served the purpose of distribution of Section related information and communication. (Fig. 11) The *Bulletin* was instituted on a quarterly basis with no set schedule and as any of you who received it can attest, it was a boring publication. In 1988 after a survey of Section member needs was assessed we developed a replacement for the *Bulletin* and in January of 1989 we instituted the new publication *Orthopaedic Physical Therapy Practice*. (Fig. 12) The magazine has evolved over the year and will continue to evolve. The format is to allow greater use of graphics to enhance reading of the clinically related material to be presented.

THE STAFF

The publications of the Orthopaedic

Section have always been accomplished with a minimum of staff from myself in the beginning to the collaboration of George Davies and myself utilizing our secretary from the practice we developed. In 1983, Chris Saudek, a new graduate from the University of Wisconsin-La Crosse physical therapy program, a program which is near and dear to my heart, joined the staff part time. Chris had a masters in mathematics before entering physical therapy and had assisted me in editing a book before accepting the position. Chris was needed due to the increased demand of going to six issues of *JOSPT*. In 1986, we went to 12 issues of *JOSPT* and four the *Bulletin*. In 1987, George Davies left and Chris picked up the slack evolving in the process to Managing Editor. In addition, Sandy Quillin

was appointed as an assistant editor from the sports section. Sandy has been recently replaced by Kent Timm. In 1988, we added a journal secretary, a 60% time

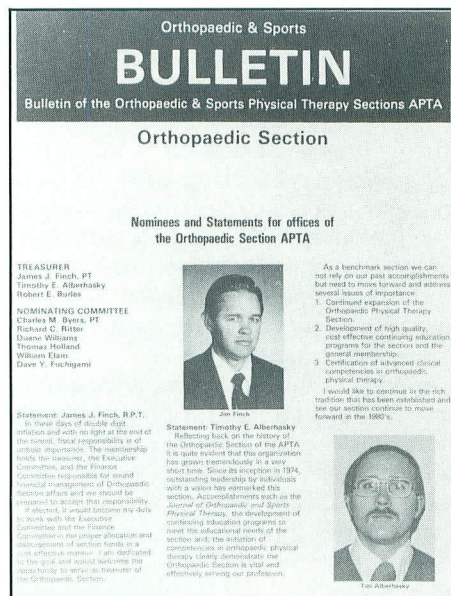


Fig. 10

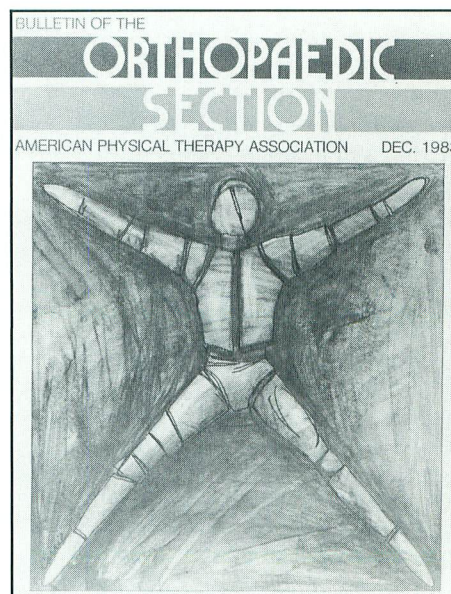


Fig. 11



Fig. 12

position. Presently we publish 12 issues of *JOSPT*, four issue of *Orthopaedic Practice*, and four issues of *Geritopics* for the Section on Geriatrics. In addition we handle all printing of the Section materials. With Theresa at 60% time, Chris at 50% time and myself at 8-10 hours a week during the school year and more on breaks and during the summer, we manage to meet all the deadlines. I truly thank the untiring efforts of Chris and Theresa.

THE FUTURE

The future looks exciting for Orthopaedic Section publications as we develop beyond our 15th year. *The Journal of Orthopaedic and Sports Physical Therapy* will be getting a new editor as I move to a position of Director of Publications for the Orthopaedic Section. *The Journal* will continue under management of Chris Saudek with a new out-of-house editor to be selected by the two Sections during this coming year. Possibly with a Ph.D. in the editor's position we will be able to gain indexing in *Indicus Medicus*. *Orthopaedic Physical Therapy Practice* will receive my attention as we continue to develop the magazine. By the end of 1990 we plan to be at the point of 4 color publication and a 40-60 page issue with expanded coverage of all aspects of orthopaedic practice. We anticipate the publication of home study courses on various topics designed to assist the membership in preparation for the specialization examination.

We have come a long way and we have a ways to go.

Strategy

Getting the Pounds Off

James A. Gould, MS, PT

This month in Strategy I want to present a method I have used in the clinic to encourage persons with back and lower extremity problems to decrease their weight if it is indicated. I have found that to achieve successful weight loss the motivation for the weight reduction must come from internal conviction rather than external pressure. To glibly tell a person that their back problem is the result of their weight is a demonstration of naivety to the etiology of back problems and a tremendous insensitivity to the anguish of being overweight.

When a surgical procedure or painful condition can be exacerbated by adding force on the joints the use of these figures, I find, has been helpful.

SOME FACTS OF INTEREST TO EVERYONE

For every mile we WALK we take 1500-2000 steps depending on the length of our stride.

The force applied to the joints of the lower extremity are higher than actual body weight due to the muscles contracting to stabilize the joint and the ground reaction forces that move you forward. These weights have been calculated and are as follows:

Lumbar Spine
Body weight + 90 lbs.
Hip
3.5 times body weight
Knee

5.0 times body weight
Ankle
1.5 times body weight

Now if we talk about that extra 10 pounds we are carrying! For every mile we walk, around the house, while shopping or around a track here are the extra pounds the joints must tolerate:

Lumbar Spine
AN EXTRA 20,000 lbs.
Hip
AN EXTRA 70,000 lbs.
Knee
AN EXTRA 100,000 lbs.
Ankle
AN EXTRA 30,000 lbs.

If one runs or jogs, the forces are multiplied by 3. Therefore, for every mile one jogs, these are the forces for the joints of the lower extremities:

Lumbar Spine
AN EXTRA 60,000 lbs.
Hip
AN EXTRA 210,000 lbs.
Knee
AN EXTRA 300,000 lbs.
Ankle
AN EXTRA 90,000 lbs.

We encourage walking and running on a regular daily basis, but we also encourage one to maintain the proper weight in light of the above facts.

ORTHOPAEDIC PHYSICAL THERAPY CLINICAL SPECIALISTS

EXAM RESULTS

The Orthopaedic Section of the American Physical Therapy Association is proud to announce the results of the 1989 Orthopaedic Specialty Exam. Twenty-six individuals who sat for the exam have passed and now carry the title of Orthopaedic Physical Therapy Clinical Specialist. This is truly an honor for those people and for our section as a whole. The individuals listed below will be honored at the annual Ceremony of Recognition of Clinical Specialists beginning at 7:00 p.m. on Wednesday,

January 31, 1990 in the Grand Ballroom A at the Hilton Riverside. This event, put on by The American Board of Physical Therapy Specialties (ABPTS) will serve as the opening ceremony for the 1990 Combined Sections Meeting. Other clinical specialists to be honored include 5 in the area of Cardiopulmonary, 9 in Clinical Electrophysiologic, 4 in Neurologic, 3 in Pediatrics, and 6 in Sports.

This year's featured speaker will be John J. Palazzo, MS, PT, a certified clinical specialist in clinical elec-

trophysiologic physical therapy, who has a private practice in Pontiac, Michigan. Palazzo will be speaking on the impact of certification on his personal career and on the physical therapy profession.

All attendees at the CSM are invited and encouraged to join the ABPTS in honoring these clinical specialists who have achieved this high level of recognition.

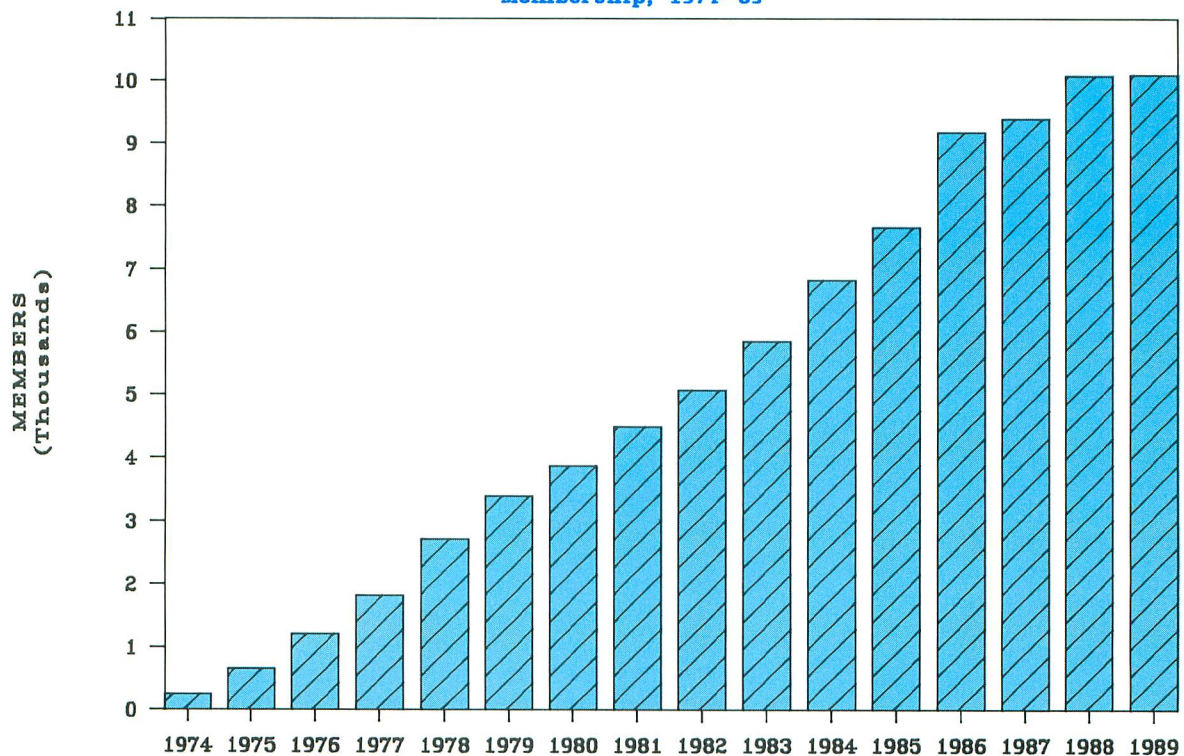
The Orthopaedic Physical Therapy 1989 Clinical Specialists to be honored are:

Steven C. Allen—Spokane, WA
John M. Barbis—Broomall, PA
Paul F. Beattie—Albuquerque, NM
Mark D. Beissel—Chelsea, MI
Anne H. Campbell—Conroe, TX
David L. Clegg—Mt. Clemens, MI
Martha Kaput Frame—Stone Mountain, GA
Joseph J. Godges—Los Angeles, CA
Brenda L. Greene—Lilbum, GA
George F. Hamilton—Greenville, NC
Patricia S. Hartman—Chantilly, VA
Ann E. Porter Hoke—Portland, OR
Michael E. Keenum—Palos Park, IL
Randall S. Kusunose—Encinitas, CA
Howard W. Makofsky—Mastic Beach, NY
Lynn N. McKinnis—Butler, PA
Mary K. Milidonis—Akron, OH
John B. Risse—Spokane, WA
Elaine R. Rosen—Fresh Meadows, NY
Roslyn Sofer—Brooklyn, NY
Jane A. Tenhula—Ballwin, MO
Kent E. Timm—Saginaw, MI
Stephen R. Weinberger—Spokane, WA
Bruce R. Wilk—Miami, FL
Russell M. Woodman—Wallingford, CT
Mary Kay Zane—Strongsville, OH

15 Years of Section Growth

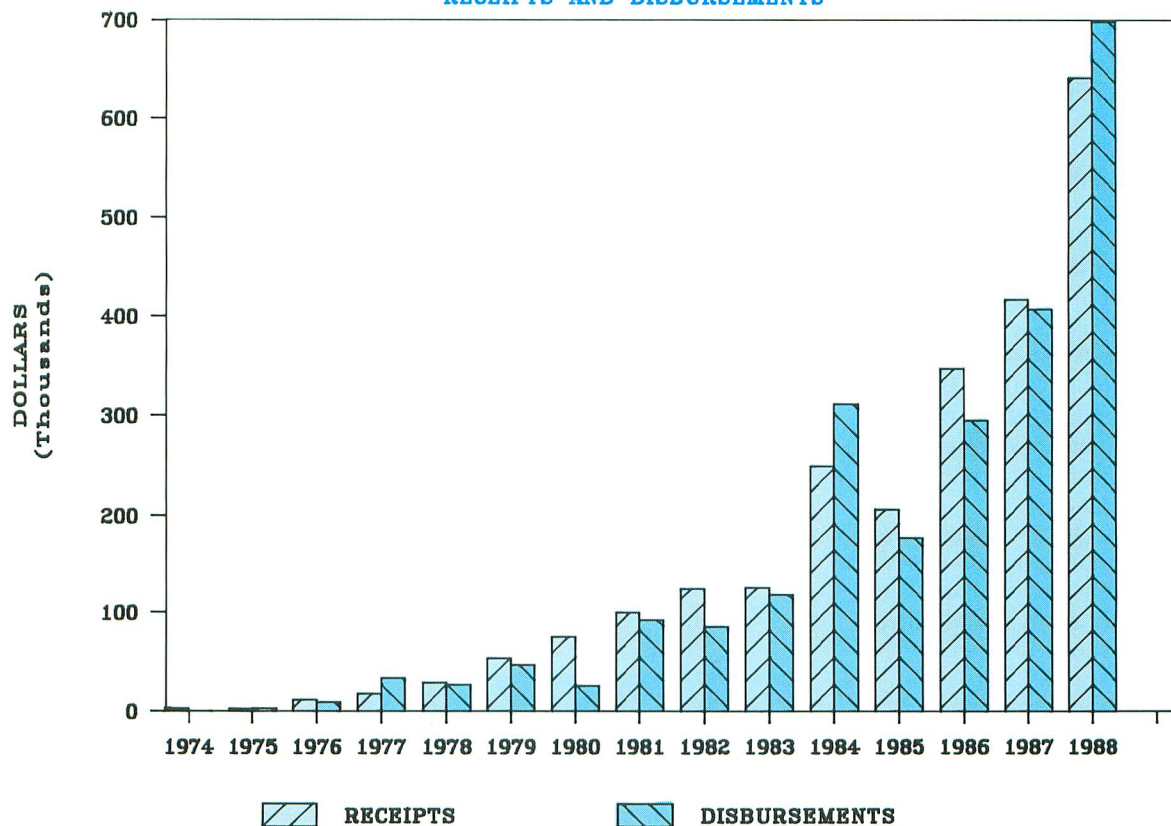
Orthopaedic Section, APTA

Membership, 1974-89



Orthopaedic Section, APTA

RECEIPTS AND DISBURSEMENTS



RECEIPTS



DISBURSEMENTS

SECTION NEWS

EDUCATION - PROGRAM

The Combined Sections Meeting in 1990 is rapidly approaching. New Orleans is preparing for the arrival of physical therapists from Wednesday, January 31, 1990, to Sunday, February 4, 1990.

As you recover from welcoming in the new decade consider joining your fellow orthopaedic therapists for a unique Combined Sections meeting.

Opening ceremonies will be a Clinical Specialization Awards Ceremony. This year we will honor the first class of board certified orthopaedic specialists. The Section honors all who were eligible to sit for the exam. Those who successfully met the Orthopaedic Speciality Council application and examination criteria will be recognized by all in attendance.

Another Section first will occur on Thursday, February 1, 1990, as the Section conducts two simultaneous seminars to lay the foundation for sub-specialty interest groups within orthopaedics. Susan Isernhagen, PT, will conduct the Industrial Session on "What is Industrial Physical Therapy" and Dan Riddle, MS, PT, will conduct the session on "Foot and Ankle Physical Therapy." An open forum on each topic will follow the educational presentations. Representatives from the Executive Committee of the Orthopaedic Section will also present a proposal to design the sub-specialization infrastructure within the Section.

Friday, February 2, 1990, a combined program on Whiplash will be held with the Section on Electrophysiology and the Hand Section. This program will analyze this growing portion of our patient population from anatomical mechanism of injury to its medico-legal implications.

Saturday, February 3, 1990, is also a day of combined programming but this time with the Section on Licensure and Regulation. This session will analyze Manipulation/Mobilization issues with Stan Paris, PT, PhD, Ken Davis, PT (APTA), and Karl Kranz, DC presenting. These speakers should provide an in depth view of the clinical practice of manipulation/mobilization, encroachment issues and possible suggestions for solutions.

Saturday continues with the Rose Excellence in Research Award presentation, Research Platform presentations, and Poster presentations.

Saturday concludes with an evening to celebrate 15 years of service to Orthopaedic Physical Therapy. The Section will honor its past presidents, Section accomplishments and future Section goals. Stanley Paris will be honored as the first recipient of the Paris Founder's Award for Distinguished Service to the Orthopaedic Section.

A sumptuous dinner will be served followed by a concert by reknown singer, Nancy Wilson. This first for 1990 serves a dual benefit since all profits from this event will be added to the Orthopaedic Challenge for the Minority Scholarship Fund of the Foundation for Physical Therapy. This will definitely be a night to remember!

Sunday, February 4, 1990, concludes the Combined Sections Meeting of 1990 with our business meeting from 10AM to 12 (noon). A light breakfast will greet Section members. This meeting provides members with direct information from their Executive Committee Members and the ability to give direct comment on Section actions. It is this active participation which encourages continued Section growth consistent with member needs and interests.

1990 will be an active year for the Orthopaedic Program Committee. Plan to participate in other Section activities:

- Competencies Course March 1990 Lake Tahoe Nevada
- Combined Canadian and American Orthopaedic Meeting May 1990 Ottawa Canada
- Annual Conference June 1990 Anaheim California
- Competencies Course August 1990 Stuart Florida

REFERRAL FOR PROFIT SURVEY RESULTS

In response to our recent survey dealing with referral for profit (RFP), which

appeared in Orthopaedic Physical Therapy Practice, there were 48 respondents. The majority (9) came from California.

Two respondents, one from Arkansas and one from Kansas, reported that they were unaware of any RFP situations in their geographic area. The remaining 96% indicated that they were aware that these existed in their areas. Five of the remaining 46 (11%) stated that they did not see these situations increasing. Interestingly, these 5 all practiced in communities of 100,000 or less.

Only twelve (25%) reported that they had not been approached to work in a referral for profit endeavor. Obviously, many PT's have been contacted regarding their interest in working in a RFP. The referring practitioners would appear oblivious to the increasing ethical pressures to avoid RFP's.

The acronym POPTS has become synonymous with physical therapy services provided with a physician's office, as opposed to joint ventures. All of the 46 respondents who indicated that RFP existed in their respective geographic areas also clearly indicated that POPTS were far more prevalent than joint ventures.

We may conclude, based on these results, that our position on RFP is based on factual events: RFP is growing rapidly in the provision of physical therapy services, particularly in cities over 100,000 population. Moreover, there was a clear consensus that the answer to this dilemma lies in governmental action; most felt that professional ethics lack enforceability.

Finally, a few comments should be shared:

Oklahoma City: "40% loss of business (as a result of POPTS); nearly failed as a business

California: "It is not unusual for a local M.D. to make his patients drive one hour to see his physical therapist when my office is 15 minutes away."

New York: "Decreasing referrals and was forced to close office"

Missouri: "80% loss of referrals from one source"

Donald L. Hiltz, PT.
Practice Affairs Committee

NOMINATIONS FROM THE FLOOR will be accepted, according to the bylaws, during the ORTHOPAEDIC SECTION BUSINESS MEETING in New Orleans at the COMBINED SECTIONS MEETING SUNDAY, FEBRUARY 4, 1990 10:00 A.M., JASPERWOOD ROOM

NOMINATION COMMITTEE

Dear Member,

I nominate each and everyone of you as spokesperson for your professional development to the Orthopaedic Section. Your forum is the business meeting. The next one is at the Combined Sections Meeting in New Orleans—and at all Annual Conferences and CSM's.

Fifteen years are behind us as a Section, one fifth of our profession's history. We are the largest Section in numbers, yet our Business Meetings are no larger than smaller sections.

These meetings are where the direction of Orthopaedic Physical Therapy is determined to a large degree—Educational Programming; input regarding specialization; how to monitor member needs and wants in this very *Journal* and *JOSPT*; how we present ourselves internationally at IFOMT; how we spend your membership dues. Concerns are aired and actions/reactions begin. Practice encroachment on manipulation, Direct Access, Referral for Profit are issues addressed.

We need more involved people, to develop a leadership base for the next 15 years. If you come, you may find yourself involved! You may even make a significant impact on your profession. For when a group of 11-12,000 is represented by 30 people, those voices are heard loudly and clearly.

So I extend to you my own personal invitation to attend. Give us your input. Join a committee. Become one who contributes ideas to our profession.

Sincerely,
Anne Campbell, Chair
Nominating Committee
Orthopaedic Section

PRACTICE AFFAIRS

by Garvice Nicholson, MS, PT
Chairman Practice Affairs Committee

I think many of us view the role of the physical therapist working in the U.S. Military Services to be one of the more autonomous ones in terms of clinical decision making. In 1975, James and Stuart (both U.S. Army physicians) published an article in *Physical Therapy* entitled "Expanded Role for the Physical Therapist: Screening Musculoskeletal Disorders." The study investigated the quality of care provided by eight Army physical therapists in primary screening and making treatment decisions for patients with low back pain. The concept of the expanded role and the quality of care rendered by the physical therapists were found to be acceptable to the patients, the physicians and the physical therapists. The eight physical therapists were queried as to whether their basic physical therapy education adequately prepared them to function in this role. All but one answered "no" and when asked what additional preparation was required, they all answered "a course in manipulation." All but one of the therapists had, in fact, attended a course in manipulation as part of their credentialing process and these courses are very similar to the ones lasting one to two weeks available to civilian physical therapists.

The level of physical therapist autonomy reflected in the article by James and Stuart is consistent with that of other Army facilities in Alabama and Hawaii as indicated by observations of and discussions with therapists from these facilities. However, all of the military services may not be the same. James Keller, PT, a member of our Practice Affairs Committee has some different thoughts to share. Mr. Keller has recently retired from the U.S. Air Force as a Lieutenant Colonel and Chief Therapist at a facility in California. He has experienced a good deal of frustration in dealing with superior medical officers in the Air Force over issues related to manipulation and the following article includes some of his thoughts and suggestions. While autonomy encompasses much more than manipulative treatment, there are many overlapping implications.

ARE PHYSICAL THERAPISTS MANIPULATORS?

by James L. Keller, M.Ed., PT

Our profession of physical therapy is constantly being challenged by the other medical professions. Do we use the terminology manipulation and diagnosis or do we stay with mobilization and assessment? If we use the word manipulation then we are criticized by portions of the chiropractic and medical professions. The complaints include insufficient training in manipulation, diagnosis, and that "physical therapists are not doctors." Most of our state practice laws do not even mention the word manipulation as a skill in our practice to use. So I think we have to ask the question, "what direction do we as physical therapists really want to take?"

If we as physical therapists want to be manipulators and use this term freely then each state board needs to change and rewrite state practice laws to include manipulation as defined by Dorland's dictionary as the passive movement by skilled hands. What other profession has more training with their hands than physical therapy?

With my past experience in the Air Force the word manipulation has had a sour condemnation. The regulation defines osteopathic manipulation as "method of palpation and manual techniques utilized by osteopathic physicians to evaluate and correct somatic dysfunction", whereas mobilization is defined as "movement which does not exceed the normal range of motion of a joint". Physical therapists in our facility could only practice mobilization, but not manipulation.

In 1987, the credential committee denied the practice of manipulation for physical therapists at our medical center. The words manipulation/mobilization may mean the same to our manual therapy colleagues, but frequently manipulation is regarded as the exclusive province of the chiropractic and osteopathic professions.

In conclusion, physical therapists have a responsibility to increase their boldness and make it apparent that we are well trained in the use of manipulation. We should be able to communicate the word manipulation as part of our vocabulary, write it in our treatment plan and bill for payment. How else will we ever be accepted as manipulators in the field of physical therapy?

(Continued on page 37)

ORTHOPAEDIC CLINICS

CRYSTAL CLINIC

The Rehabilitation & Health Center of Crystal Clinic is a multidisciplinary program designed to provide the community with the highest quality evaluation and treatment of post-surgical and post-injury musculoskeletal disorders as well as state of the art information regarding injury prevention and self-management. The comprehensive staff of the RHC is bound by common philosophy of treating the musculoskeletal system by integrating biomechanical, physiological, and psychological perceptives. Patient education and therapeutic exercise for the purpose of self-management are central to this commitment.

The RHC has assembled qualified professionals who are dedicated to providing prompt, accurate evaluation of musculoskeletal disorders, as well as cost effective treatment designed to assist the

individual in long term health management. The Rehabilitation & Health Center is staffed with physical therapists, exercise physiologists, athletic trainers, dieticians, in addition to stress management and biofeedback professionals. Services provided by the center include: progressive musculoskeletal rehabilitation, health promotion and injury prevention programs, a sports medicine hotline, as well as prescreening, training, and rehab management of the MISL soccer team, the Cleveland Crunch. In striving for comprehensive health care, RHC also provides stress management and biofeedback intervention, industrial wellness programs, and dietary counseling.

The Rehabilitation & Health Center is part of an 81,000 square foot musculoskeletal complex building whose grand opening was in June of 1989. This

by James A. Porterfield, M.S., P.T.



Fig. 1: Outside of Crystal Clinic.



Fig. 2: Reception area.

musculoskeletal complex originated out of a four year project with the goal of assembling medical professionals in the field of musculoskeletal science, thus providing the highest quality care under one roof, called the Crystal Clinic. The building houses ten orthopaedic surgeons, five rheumatologists, a plastic surgeon, five hand surgeons, an orthotist/prosthetist, two outpatient surgical suites, a medical laboratory, and the 7,000 square foot Rehabilitation & Health Center. Also within the musculoskeletal complex is a 100-seat auditorium with a unique design that links the surgical suites and the Rehabilitation & Health Center to persons in the auditorium through live video broadcasting.

Medical education is a key concept of

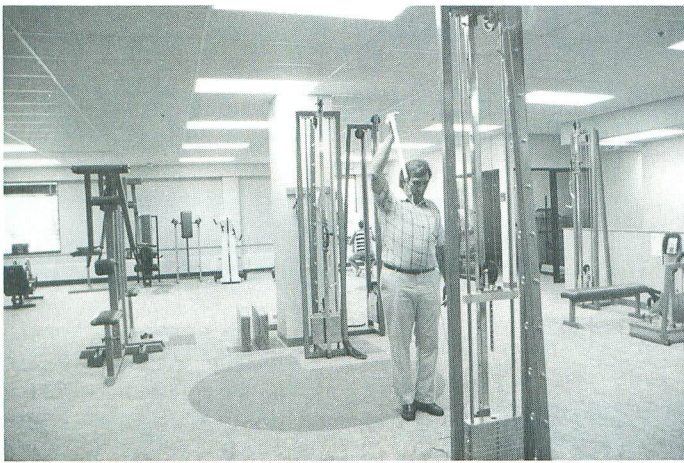


Fig. 3: Treatment Area.

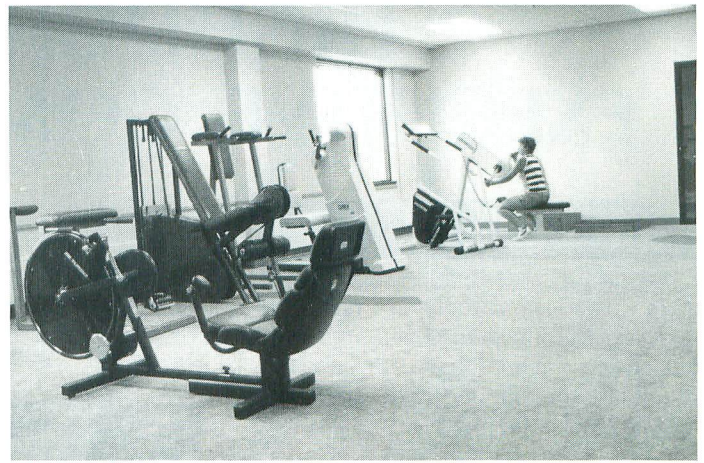


Fig. 4: Workout Area.

the Crystal Clinic. Each medical group within the Crystal Clinic is its own separate practice, although each group offers its own specialty to the comprehensive management of musculoskeletal injuries. The only services that cannot be provided are those surgical cases that require inpatient hospital care. Research into other health care centers has amplified the uniqueness of Crystal Clinic, as there is no other facility design-

ed to completely manage one body system.

One interesting aspect of the Rehabilitation & Health Center, specifically, is the equipment contained within its 2,000 square foot open gym area. This equipment was designed and modified by the physical therapists and built by a junior engineering student at the University of Akron. The design and development involved a two year process of modifying

and perfecting the equipment to best facilitate functional, nondestructive resistance training.

The clinical staff of the Rehabilitation and Health Center includes Jim Porterfield, P.T., M.A., A.T.C., Vince Secker, P.T., Diane Winters, P.T., Wally Linville, P.T., Karen Hoppstock, A.T.C., Bill Ingemi, A.T.C., M.S., and Laurie Garrett, B.S.

**The Orthopaedic Section
Executive Committee
urges its members
to become
*Delegates to the
APTA House of
Delegates
in Anaheim
this June.***

Orthopaedic Section Survey

The Orthopaedic Section needs your input as to whether you wish to have the Section receive a vote in the APTA House of Delegates. Please write to us and tell the Executive Committee your opinion.

Please send your response to:
Executive Committee
Orthopaedic Section
505 King St. #103
La Crosse, WI 54601

HIGHLIGHTS OF FALL EXECUTIVE COMMITTEE MEETING

Publications—Jim Gould. JOSPT

We have 11 more manuscripts this year than we had last year at this time and we are consistently getting about 5 book reviews for each issue. We have the new products section and will be having classic articles soon. We've just established a policy for video tapes.

Kent Timm was appointed Sports Associate Editor of *The Journal* in July.

Research—Joe Threlkeld

Joe will be resigning as Chair of the Research Committee effective CSM 1990, due to additional time he needs to pursue his own research.

Twenty-one abstracts were submitted for evaluation, fifteen as platform and six as poster. All abstracts were evaluated at length, independently and blindly, by all members of the Research Committee. Therefore, nineteen abstracts were accepted, eight platform and eleven poster. The abstracts will appear in *OP & JOSPT*.

A total of ten articles were nominated for the Steven J. Rose Endowment for Research Award. Each of the articles were independently evaluated by at least three members of the Research Committee. The Research Committee put forth their recommendation to the Executive Committee for the Steven J. Rose Endowment for Research Award winner.

=MOTION= Dan Riddle moved that Richard L. Smith of Missoula, Montana, receive the Steven J. Rose Excellence in Research Award for 1990 for the article entitled, "SHOULDER KINESTHESIA AFTER ANTERIOR GLENOHUMERAL JOINT DISLOCATION". Seconded by Jonathan Cooperman.=PASSES=

Practice Affairs— Garvice Nicholson

Our most recent activity has been contacting other committee members trying to get articles and opinions on things that would be useful to publish in *Orthopaedic Practice*. We would like to maintain a forum to discuss practices. The last one we did was on the diagnosis issue.

Don Hiltz, a Committee member, has been extremely active. Garvice has put him in charge of the referral for profit issue because he has been so involved with that over the years. Don is the one

who put the survey in the last issue of *Orthopaedic Practice* on referral for profit. We received 50 responses which Garvice summarized. The summary was submitted to the Section office for publication in the next *Orthopaedic Practice*.

Public Relations— Jonathan Cooperman

The major activity of the Public Relations Committee has been working on the 15th Anniversary Special Edition of *Orthopaedic Practice*. Currently we have an article, in interview format, on the Past Presidents and some information on the rise in membership over the past years. Over \$400 in revenue was made on the Annual Conference Raffle.

Awards—Carolyn Wadsworth

Carolyn was appointed Chair of the Awards Committee this past August. She has been working further on drafts for the Excellence in Teaching of Orthopaedic Physical Therapy Award and the Distinguished Service Lecture Award. Carolyn would like to have the awards adopted and publish the criteria as soon as possible to make the Section aware that these awards exist.

OLD BUSINESS

Update on Competency Examination—Joe McCulloch

The second Competencies Exam is set for January 31, 1990, in New Orleans. The Council just finished its review of all the applicants for this exam and have sent documents back to those who have not met the criteria for them to resubmit.

The third test will be in 1991. After that time we will have to look into developing a fourth test. We will be starting to do an item-writers workshop at the next ABPTS meeting that will train all the ABPTS members in conducting item-writer workshops.

Update on Competency Course, Chicago, IL, August 7-13, 1989— Annette Iglarsh

Approximately 55 people attended the Competencies Course. The facility was in suburban Chicago. Thirty-six people attended both courses, six attended only course A, and sixteen attended only course B. The response of the participants was excellent.

Discussion of the Section getting a vote in the HoD— Annette Iglarsh

We would like to organize a reception for our Orthopaedic Section members, who are also Delegates in the House. We hope to get general impressions from the members on issues such as Sections having a vote. Then we will give those impressions back to the delegates in attendance so we have a solid image in the House.

We need to put some highlight boxes in *Orthopaedic Practice* encouraging our members to become Chapter Delegates and to encourage them to vote positively on the Section getting a vote.

Discussion of APTA award nominees, deadline December 1st—Anne Campbell

We were very successful in our search for APTA office nominations. This year we were able to glean 28 nominations, last year we had 11 and in previous years before that it was only 4 altogether.

Leadership Training— Duane Williams

What are the priorities this year in terms of goals of the Section? Our objective could remain as stated with the following inclusion to make it similar to APTAs: "to provide a forum where persons having a common interest in orthopaedic physical therapy may meet to concur and promote education, practice, and research to the orthopaedic profession".

NEW BUSINESS

Nominations for 1990 Section slate—Anne Campbell

The Nominating Committee asked the Executive Committee and those present for nominations for the 1990 slate of Orthopaedic Section offices. Those offices up for election this year are Treasurer and Nominating Committee Member. The deadline for nominations is January 1st, 1990.

Discussion of the Section's 15th Anniversary—Annette Iglarsh

Our goal is to get corporate sponsors, whose donations would cover our cost. The \$100/person fee for the dinner would

then be our donation to the Foundation. Theresa has been doing a wonderful job as the contact person so if you have any questions call her at the Section office.

Editor Vacancy—Jan Richardson

The board received a letter from Jim Gould expressing his interest in resigning from his position as Editor of the Journal and putting it out for bid.

Recommendation of new OSC member—Joe McCulloch

Rick Ritter's term is due to end after this year. The Council recommends that he be re-appointed for two reasons: 1) We feel we need the continuity to keep us going next year, and 2) The next person appointed Chair has to have at least two years remaining in their term. No one on the Council at that time will have two years in.

Dues increase, effective 1991, \$50—Bob Burles

Bob would like the Section to raise the

dues to \$50 per year effective January 1, 1991. It costs the Section \$53 per member for our publications. We are currently charging \$30 for membership dues per person. Bob resisted a dues increase last year because we were going to tighten up our budget. We have, but now are budget is as tight as we can get without starting to compromise.

=MOTION= Increase dues from \$30 to \$50 effective January 1, 1991. =PASSED=

Other Committee Appointments: The Committees needing appointment are; Education, Research, Awards, Practice, and Public Relations. The only one that differs is Education in that the responsibilities of the Chair of the Education Committee are vast and require an in-house training program. It was recommended that Annette be reappointed for the next three year term and remain on as the Education Committee Chair.

The following were recommended for Committee appointments:

Dan Riddle for the Research Committee Chair.

Carolyn Wadsworth to continue as Awards Committee Chair.

Garvice Nicholson as the Practice Affairs Chair.

Jonathan Cooperman as the Public Relations Chair.

=MOTION= To investigate the feasibility of producing a home study program on Cervical Spine. =PASSED=

=MOTION= For the Orthopaedic Section Executive Committee to investigate a Bylaw Change to establish a Board of Directors with the elected officers being the Executive Committee. =PASSED=

=MOTION= To charge the Executive Committee to investigate the creation of special interest groups to include Industrial Physical Therapy, Foot and Ankle Physical Therapy, and TMJ Physical Therapy. These groups are to be given space in OP, a place on the proposed Board of Directors, and programming space for presentation supported by the Orthopaedic Section. =PASSED=

Adjournment

RESIGNATION

On October 4, 1989 David Thomack terminated his employment with the Orthopaedic Section. The Section wishes him well in future endeavors.

Terri Pericak has been appointed by the Executive Committee to fill the vacated position and will be available to the membership and Executive Committee to carry on the business of the Section.



SHORT TERM COURSES

RATES

INSTRUCTIONS FOR SHORT-TERM COURSE ADVERTISEMENTS

Advertisers are requested to include all necessary information for prospective course participants. The *Orthopaedic Physical Therapy Practice* is published 4 times per year—January, May, August, November. Ad deadlines are the first day of the preceding month. Rates are \$5.00 per line. Lines may be estimated on a 45 character per line basis (this includes letters, punctuation marks and spaces). The right to reject an ad or change wording is retained by the editor. Ads must be accompanied by payment. Send copy to: Orthopaedic Physical Therapy Practice, 505 King Street, Suite 103, La Crosse, WI 54601.

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ABSTRACTS OF POSTER PRESENTATIONS

The following research abstracts are to be presented at the Combined Poster Presentations on Saturday, February 3, 1990 between 1:30 and 5p.m. The author is scheduled to be present at the poster for questions between 3 and 5p.m.

ISOKINETIC EVALUATION OF SHOULDER ROTATIONAL STRENGTH BETWEEN THE PLANE OF THE SCAPULA AND THE FRONTAL PLANE

Bruce H. Greenfield MMSc, PT Robert Donatelli MA,PT Michael J. Wooden, MS, PT Joseph Wikles, MD Physical Therapy Associates of Metro Atlanta (6909 Tara Blvd. Jonesboro, Georgia 30369)

The purpose of this study was to determine whether shoulder rotational strength was greater in the plane of the scapula (POS) or the frontal plane (FP).

Isokinetic shoulder rotational strength was evaluated in 20 subjects. Using the Merac (Universal Gym Equipment, Inc., Cedar Rapids, Iowa), test data was gathered in the right shoulders, in 45 degrees abduction, at speeds of 60 degrees per second, in the plane of scapula (POS) and frontal plane (FP). Each subject returned within one week for retests to establish reliability. The average correlational coefficient across tests was .87. The Merac computer system was used to analyze data. Mean and standard deviations for peak torque to body weight were calculated. A paired t-test was used to examine the difference in the means for internal and external rotation between the two positions. The results indicated no significant difference between the two positions for shoulder internal rotational strength values. However, shoulder external rotational strength value in the POS were significantly higher than in the FP ($p < .001$). These preliminary results suggest isokinetic strength training and testing may be preferable in the POS than the FP.

UPPER BODY ACTIVE ASSISTED EXERCISE: NORMATIVE DATA FOR UNTRAINED YOUNG MALES AND FEMALES AND COMPARATIVE DATA FOR OLDER MALES.

Hasson S, Bennett P, Cox R, Fowler C, Fowler M, Hughes L, Kwiatkowski E (University of Texas Medical Branch, Galveston, TX 77550).

Upper extremity strengthening is a major focus of therapeutic training for many patient populations. This study introduces a method of extremity training utilizing a newly developed pneumatic machine, the Gravitron by Stairmaster. This equipment allows for active assistive training during bar-dip (BD) and pull-up (PU) exercises at a selected % of the subject's body weight. The purpose of this study was to gather normative data on 20-39 year old males [M] (N=12) and females [F] (N=13) at 25, 50 and 75% body weight for BD and PU exercise. In addition, 2 single case studies were performed on older males (age 45 and 60). Oxygen consumption (VO₂) was also measured for selected subjects (N=4; M: 32, 45, 60 y.o. and F: 32 y.o.) during BD and PU exercise bouts of 50% body weight. All subjects completed 6 exercise sessions (BD25, BD50, BD75, PU25, PU50, and PU75; randomly assigned) with 48-hrs recovery between bouts. Subjects were instructed to perform as many repetitions (MAXR) as possible with proper mechanics and rate (1-sec concentric, 2-sec eccentric), set by visual metronome. F scored significantly lower ($p < 0.05$) than M for MAXR at all % of body weight for both exercises with the following % (F/M X 100): (BD25 = 17.4%; BD50 = 19.0%; BD75 = 11.9%; PU25 = 25.4%; PU50 = 23.0%; PU75 = 7.3%). There were no differences between age groups 20-29 and 30-39. The 2 older M had lower scores on all MAXR compared to the young M group with the 60 y.o. subject (M1) scoring much lower than the 45 y.o. subject (M2) with the following % (M1 or M2/M X 100): (M1: BD25 = 11.85; BD50 = 15.2%; BD75 = 3.3%; PU25 = 13.0%; PU50 = 20.7%; PU75

= 5.2%) (M2: BD25 = 41.7%; BD50 = 41.6%; BD75 = 43.0%; PU25 = 73.3%; PU50 = 67.8%; PU75 = 46.9%). VO₂-PU was higher than VO₂-BD for all 4 subjects. VO₂ was lowest for M1 and F subject, but appeared no different between all 4 subjects when expressed as VO₂/VO₂max for both exercises. Untrained young M are stronger than untrained young F for upper extremity exercise when adjusted as % body weight. There appears to be a substantial decrement in upper body strength as age progresses. Oxygen consumption during active assisted exercise appears to be less for F and older M, but is no different relative to percent of VO₂max.

PALPATION TO ASSESS ILIAL SYMMETRY/ASYMMETRY; ISOMETRIC MOBILIZATION TO RESTORE ILIAL SYMMETRY.

Ellis T, Moore T, Jackson R, Martin R; California State University Fresno (152 Harbor Oaks Circle, Santa Cruz, CA 95062)

The purpose of this study was to determine intratester and intertester agreement when using a palpation technique in assessing ilial symmetry or asymmetry. This study also sought to determine the effectiveness of an isometric mobilization technique designed to restore ilial symmetry in those subjects who are assessed as having an asymmetry.

The subject population consisted of a convenience sample of 35 university student volunteers.

This was a correlational study which utilized a blind design with two physical therapists as testers. Data was analyzed using percentages.

Prior to the treatment/no treatment variables, intertester agreement of ilial symmetry/no symmetry was found in 31 of 35 subjects (88.6%). Following the first treatment/no treatment variable, intratester agreement was found in 30 of 30 subjects (100%) where no treatment had been applied. Where both therapists agreed there had been an ilial rotation,

therapist #1 detected a change of ilial symmetry in 5 of 5 subjects (100%) following the application of the mobilization technique to these 5 subjects by therapist #2. Therapist #1 detected no change of ilial symmetry in 4 of 4 subjects where no mobilization had been applied by therapist #2. Following the second treatment/no treatment variable, intertester agreement of ilial symmetry was found in 32 of 35 subjects (91.4%). Where both therapists agreed there had been an ilial rotation, therapist #1 detected a change of ilial symmetry in 3 of 3 subjects following the application of the mobilization technique to these subjects by therapist #2. Finally, therapist #1 detected a change of ilial symmetry in 1 of the subjects where no mobilization had been applied.

We conclude the palpation techniques to be reliable in assessing ilial symmetry/asymmetry in the saggital plane. We also conclude the isometric mobilization technique is capable of restoring ilial symmetry.

TITLE: RTV-11 PLAYING CASTS: A SURVEY OF ITS USE WITH ATHLETIC HAND AND WRIST INJURIES.

Mark De Carlo, MS, PT, ATC, Arthur Rettig, MD, John Darmelio, ATC, Methodist Sports Medicine Center (1815 N. Capitol Ave., Suite 500, Indianapolis, IN 46202)

Over the last three years, we have used a silicone rubber playing cast to treat 144 cases of athletic wrist and hand injuries. The purpose of this study was to evaluate the results of this treatment regimen. From August to December 1988, all 49 patients who received RTV-11 playing casts at this clinic were surveyed for loss of time from sport, eligibility to play with the cast, suitability of the cast for their position, fit of the cast, and overall satisfaction rating. The majority of the patients were high school football players (group age range 12-21 years). Over 60% of the cases involved metacarpal fractures, phalanx fractures and sprains, triangular fibrocartilage tears, and finger dislocations. There have been no reinjuries reported in the cases in this study. All fractures were healed clinically and radiographically. Among the 49 surveyed (36 respondents), an average of 1.4 days were missed from practice while an average of 3.9 days were lost from competition. Fifteen were questioned by officials, but none were removed from practice or competition as a result of wearing the cast. Most of the athletes (26 or 72%) responded that their

cast worked well for their position, and nearly all (32 or 94%) reported continued good fit of the cast. On a scale of 1 to 4, with 1 denoting excellent satisfaction, the average overall rating of the cast was 1.4. It can be concluded from this study that RTV-11 silicone provided an effective means of protection for this group of athletes with wrist and hand injuries when returning to competition. The cast was adapted for various positions with minimal time lost to sport and was found to fit well as long as needed following injury.

THE EFFECTS OF MYOFASCIAL RELEASE, CONTRACT-RELAX, AND SIMPLE REST ON PASSIVE RANGE OF STRAIGHT-LEG RAISING.

Gimenez C, McLane L, Poumakis D, Butler C, and Elbaum L. Department of Physical Therapy, Florida International University (c/o L. Elbaum, Department of Physical Therapy, FIU, Miami, FL., 33199) Supported in part by an equipment grant from Hoggan Health Industries, Draper, Utah.

The purpose of our study was to compare the effects of myofascial release (MR), contract-relax (CR), MR with CR, and simple rest (R) on passive ROM of straight leg raising (SLR). Subjects were 65 normal individuals; 44 males and 21 females. They were randomly assigned to one of the 4 experimental groups. The range of passive SLR was measured with a gravity inclinometer fixed to the tibial shaft. A hand-held dynamometer was interposed between the examiner's hand and the achilles tendon so that the amount of applied force could be monitored. Force was applied until the subject complained of slight discomfort. Subjects were then treated with one of the 4 techniques. Immediately after treatment, 30 minutes after treatment, and 24 hours after treatment, SLR was measured with identical technique, except that force equivalent to initial testing was applied, rather than until slight discomfort. All groups showed increases immediately after treatment; the MR group was the only one to show significantly greater increases than the R group. No significant differences were found 30 minutes or 24 hours after treatment. Based on this experiment with normals, we conclude that MR techniques are effective in facilitating a short-term increase in SLR, however maintenance of SLR increases over time may not be affected by these techniques. Further study is certainly recommended.

THE EFFECTS OF HIKING POSITION ON STRENGTH, ENDURANCE AND LUMBAR CURVE IN A SIMULATED COMPETITIVE DINGHY SAILING TASK.

Roebuck E, Elbaum L. Department of Physical Therapy, Florida International University (c/o Elbaum L. Department of Physical Therapy, FIU, Miami, FL., 33199) Supported in part by an equipment grant from Hoggan Health Industries, Draper, Utah.

The purpose of our study was to compare the effects of 2 different hiking positions on lumbar curve, abdominal strength and endurance in a simulated dinghy sailing task. "Hiking" is a technique which prevents tipping in heavy winds. It is an important and difficult competitive task, and is suggested as the cause of low back pain. One of two techniques are used. The straight leg (SR) technique involves the trunk inclined backwards about 60 degrees from vertical, 40 degrees of hip flexion, and 10 degrees of knee flexion. The bent leg or "droop" (D) technique involves the same trunk position, 70 degrees of hip flexion, and 60 degrees of knee flexion. Our subjects were 18 sailors free of lumbar pain aged 18 to 35. We measured maximal isometric abdominal strength, endurance and lumbar curvature in both positions, and lumbar curve in normal standing. Measurements were made 1 week apart, and the order of position presentation was systematically altered so as to control for any learning or fatigue effects. The lumbar curve was significantly decreased from normal standing posture with both techniques. The mean D position was a reversed lordosis, but not significantly different from the minimal lordotic SR position. Abdominal strength and endurance showed no significant differences. Neither technique affords significant advantages in strength or endurance, but both involve maintenance of abnormal lumbar posture for long periods of time, which may be an important factor relative to the high incidence of spinal musculoskeletal complaints.

1974—Orthopaedic Section Formed. The International Federation of Orthopaedic Manipulation Therapy (IFOMT) was formed and the North American Academy of Manipulation Therapy was dissolved simultaneously. 465 members.

RELIABILITY OF THE KNEE SIGNATURE SYSTEM (KSS) FOR MEASURING TRANSVERSE ROTATION OF THE HUMAN KNEE DURING LEVEL WALKING

William S. Queale, University of Delaware Newark, DE (930 Cobble Creek Curve, Newark, DE 19702)

The purpose of this research project was to determine the intertrial and intertest reliability of the Knee Signature System for measuring transverse plane rotation of the tibiofemoral joint in normal subjects during level walking. Eight subjects (4 male, 4 female ranging in age from 19-38 years) were used in the study. A Knee Signature System electrogoniometer (Acufex, Inc.) was placed on the right knee of each subject. Once accommodated to the device, the subject was placed on a level treadmill and brought up to a speed defined as a "comfortable walking pace". After 2 minutes for accommodation to the treadmill, data was collected for 9 full gait cycles (9 trials). The device was then removed from the knee and replaced by the same examiner and the procedure was repeated. An ITT personal computer, utilizing the KSS software package, was used to retrieve the raw data in a tabular format. Maximum internal and external rotation values were determined for each gait cycle and from these values the total transverse rotation was calculated. The mean total rotation for all subjects in all trials was 12.41 degrees \pm 2.71 degrees. Reliability was determined by using the appropriate equation for the Intraclass Correlation Coefficient (ICC). Intertrial reliability for a single trial (ICC[2,1]) was determined to be .662. Intertrial reliability for the mean of 9 trials (ICC[2,9]) was determined to be .952. Intertest reliability for a single test (ICC[2,1]) was determined to be .693. It is concluded that the intertest reliability, using the mean of 9 trials per test, was shown to be nearly acceptable at a .70 level. Intertrial reliability for a single trial was poor, but for the mean of 9 trials was very high. Clinically, it is important to know the limitations of any device being used to take measurements. It is recommended from this data that the KSS can be used to measure knee rotation but will give a reliable measurement only within a single test of a single subject and only if the mean of at least 9 trials is used.

THE EFFECTS OF PULLING EXERCISES ON TRUNK FLEXOR AND EXTENSOR STRENGTH: A PILOT STUDY

Patricia Estes and Carolyn Kisner, Walnut Hills Physical Therapy, (8607 Chevington Chase, Pickerington, Ohio 43147) Supported in part by an Honors Scholarship, The Ohio State University

The purpose of this study was to design an exercise program to strengthen the trunk flexor and trunk extensor muscle groups using elastic resistance in a functional upright position and measure the change in strength in healthy women who have had at least one normal pregnancy and delivery.

Twelve female volunteers between the ages of 20 and 40 who had at least one normal delivery a minimum of six months prior to the study were randomly assigned to either the control or experimental group after the pre-test session. In this pilot study, pre- and post-test data for the trunk flexors and extensors was collected with a computerized Kin-Com isokinetic dynamometer. Those in the experimental group (n=6) followed an exercise program for 6-8 weeks in which they performed pulling motions against an elastic resistive force in the standing position. The exercises required trunk flexion with posterior pelvic tilting and trunk extension with anterior pelvic tilting along with the pulling forces exerted by the upper extremity musculature. The control group (n=4; two subjects withdrew from the study) maintained normal, non-exercise activities during the testing period.

An analysis of variance and covariance with repeated measures showed no significant difference between the control and experimental groups between the pre- and post-tests. This was true for all three strength measurements of average force, average torque, and peak torque. The Null hypothesis, that there would be no differences between groups was accepted.

The relevance of this study is its stimulus for further investigation of important unanswered questions. Several factors are considered including the small sample size, the appropriateness of the testing device, or whether the muscles were appropriately stressed with the exercises. The importance of specificity of exercise for functional rehabilitation of the trunk musculature remains an important clinical issue.

EFFECT OF VARYING ACCELERATION AND DECELERATION RATES ON ISOKINETIC PERFORMANCE ON THE KINETIC COMMUNICATOR.

Rathfon J, Matthews K, Yang A, Morrissey

M, Levangie P. [Sargent College of Allied Health Professions, Boston University, One University Road, Boston MA 02215

The Kinetic Communicator provides three rates of acceleration/deceleration (low, medium, and high) to control the limb and thus prevent impact forces and torque overshoot found with free acceleration. The purpose of this study was to examine the effect of three acceleration rates on isokinetic performance of the knee extensors on the Kinetic Communicator. Thirty-one healthy females performed three concentric/eccentric contractions of the knee extensors at each acceleration/deceleration rate at a velocity of 90 degrees/sec. A one-way repeated measures ANOVA and Scheffe post-hoc tests were used to compare, between each acceleration/deceleration rate, the average velocity, peak torque, and average torque of the whole curve, and average velocity, average torque, and range of motion of the acceleration and deceleration phases. The acceleration/deceleration rate significantly affected the average velocity of the whole curve, acceleration phase, and deceleration phase. Although acceleration/deceleration rate had some effect on average torque in the acceleration and deceleration phases, peak torque and average torque of the whole curve were not significantly affected. The rate of acceleration/deceleration influenced the points in the range where acceleration and deceleration phases occurred in the concentric mode. We concluded that: 1) in our study the choice of acceleration/deceleration rate at 90 degrees/sec does not appear to have a clinically significant effect on average torque and peak torque for the whole curve, and 2) elimination of arbitrary portions of the torque curve by researchers attempting to report data from only the constant velocity phase may not be warranted.

LOWER EXTREMITY EMG OF ELITE COLLEGE BASKETBALL PLAYERS DURING THE RUNNING JUMP SHOT.

A. Joseph Threlkeld, Robert Shapiro, J. Michael Ray; Biodynamics Lab, Univ. of Kentucky, (c/o Univ. of KY Med Cntr., PT Division, Rm. 4, Annex 1, Lexington, KY 40536)

The rehabilitation of existing sports injuries and the prevention of musculoskeletal damage during a sport activity requires a far more detailed knowledge of the requirements of these

events than currently exists. The component musculoskeletal stresses incurred and the motor strategies that are employed to meet these demands rehabilitation programs. Our purpose was to describe the motor strategies of elite jumpers during a realistic simulation of a jump shot. We collected data from eight male varsity college basketball players. All subjects ran, came to a rapid stop then jumped, simulating a game shooting situation. Surface EMGs of 6 muscles in the dominant lower extremity [gluteus maximus (GM), rectus femoris (RF), vastus lateralis (VL), semimembranosus (SM), biceps femoris (BF) and medial gastrocnemius (MG)] were collected with a Therapeutics Unlimited EMG unit using onsite preamplified electrodes and sampled at 2000 Hz. Ground reaction force (GRF) was collected with a Kistler force platform and sampled at 2000 Hz. Three dimensional motion data (trunk, hip, knee, ankle) were simultaneously collected using high speed videography with the Motion Analysis EV-3D system and sampling at 200 Hz. Typical trials were compared between players and the common motor patterns were correlated with the events during jumping. PRIOR TO TOUCHDOWN/STOP: Normalized EMG activity (NEMG) in the dominant leg was quite variable with the GM, RF, VL, SM and BF showing moderate activity in most subjects. LANDING/COCKING PHASE: Consistently high NEMG of the GM and VL of the dominant leg was coupled with rapid eccentric loading of these muscles and rapid increases in vertical GRF. The BF was moderately active. PUSHOFF PHASE: High BF and MG NEMG was coupled with moderate concentric NEMG of the GM and VL. We concluded that run-stop-jump shot activity: 1) utilized energy storage via eccentric activity of the GM and VL during landing/cocking; 2) depended on vertical thrust via concentric activity of the MG during pushoff; 3) utilized the BF as a trunk and knee stabilizer during the landing/cocking phase and to extend the hip during the pushoff phase; 4) showed inconsistent utilization of the RF and SM. These findings have practical implications for design of athletic training regimens, treatment programs and rehabilitation criteria for basketball players. Thus, for the activity of the running jump shot, the GM and VL should be tested or rehabilitated eccentrically in order to absorb the vertical force of the landing/cock-

ing phase whereas the BF is required to perform maximally both concentrically and eccentrically. The MG must be capable of rapid concentric contraction to provide vertical thrust. These measurements could be utilized as pre-season screening criteria or for determining when an injured athlete could be returned to play.

CORRELATION BETWEEN LUMBAR CURVE, AND HAMSTRING AND PSOAS FLEXIBILITY IN SUBJECTS WITH LOW BACK DISABILITY.

Knowlton-Benner E and Bultman L (Portage Physical Therapists, Ravenna OH 44266) Applied Physiology Research Laboratory, Kent State University

The purpose of this study was to compare three lumbar curves, normal standing (NSLC), forward bending (FBLC), backward bending (BBLC), to the flexibility of the hamstring and psoas muscles. Ten male and 10 female subjects (AGE=38.00±6.93 yr), with a history of low back pain participated. The Oswestry Low Back Pain Disability Questionnaire was administered. Three trials of the following were collected: lumbar curve with a flexible ruler at two vertebral levels (T10-S2 and L2-S2); flexibility of the hamstrings and psoas muscles under two separate body positions utilizing a modified universal protractor; a sit and reach test. Repeated measures ANOVA, simple effects and Pearson Product Moment correlation were utilized in the data analysis. No significant between-trial differences were obtained.

Subjects scored in the minimal

disability classification (0-20%) on the Oswestry scale, (15.70±8.57%); no significant relationship to flexibility or lumbar curve measures. Lumbar curve mean values were significantly different between T10-S2 and L2-S2 and across NSLC, FBLC and BBLC. NSLC and BBLC mean values at both vertebral levels were similar (NSLC 50.42±12.98 degrees, 21.06±6.75 degrees; BBLC 65.78±17.69 degrees, 26.87±8.65 degrees; T10-S2, L2-S2 respectively).

Intercorrelations between flexibility and lumbar curve measures yielded 10 significant correlation coefficients (4[18,2]=.44, p=.05), out of 48 inter relationships, ranging from r=.46 to r=.72. Low nonsignificant correlation coefficients were observed between sit and reach and all lumbar curve measures. In conclusion, despite understandable mean differences between vertebral levels (T10-S2, L2-S2), vertebral level does not appear to be an important factor in determining the degree of lumbar curve (NSLC vs BBLC). Lumbar curve measures show minimal relationship to hip flexibility. There is a poor relationship between subjective pain/disability and classical measure of lumbar dysfunction.

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ABSTRACTS OF PLATFORM PRESENTATIONS

The following research abstracts are to be presented at the platform presentations of the Orthopaedic Section on Saturday, February 3, 1990 between 1:30 and 4:30.

EFFECT OF LONGITUDINAL AND TRANSVERSE ELECTRODE PLACEMENT ON KNEE EXTENSOR TORQUE INDUCED BY NEUROMUSCULAR ELECTRICAL STIMULATION;

Brooks ME, Smith EM, Currier DP; University of Kentucky; (Div of PT, UKMC, Annex 1, Lexington, KY 40536-0079).

The purpose of this study was to assess the effect of electrode placement in relation to fiber orientation of knee extensors on torque production when electrically stimulated. Thirty-five healthy subjects (19 men, 16 women) volunteered for the study. Their dominant leg was tested by a dynamometer for maximum isometric muscle contraction (MVC). The knee extensors were then stimulated electrically to produce torque equivalent to 30% of MVC. The transcutaneous electrodes were placed longitudinally (parallel) and transversely (perpendicular) relative to the fiber direction of the muscles stimulated. Both torque and current amplitudes were recorded for both electrode placement conditions. Descriptive statistics and paired t-tests were used to reduce and analyze data. Results revealed that longitudinally placed electrodes contribute significantly more torque than electrodes placed transversely over the knee extensors. Physical therapists should be aware of this technique when using neuromuscular electrical stimulation clinically to produce torque.

REHABILITATION FOLLOWING ACL RECONSTRUCTION.

Mark De Carlo, MS, PT, ATC, K.D. Shelbourne, MD, J.R. McCarroll, MD, A.C. Rettig, MD, L.D. Hirschman, PT, Methodist Sports Medicine Center (1815 N. Capitol Ave., Suite 500, Indianapolis, IN 46202)

Within the last decade, there has been a great deal of discussion concerning rehabilitation following ACL reconstruction. The original approach to ACL rehabilitation at this facility was based on the early work of Paulos and Noyes and has progressed to an accelerated program which emphasizes early terminal extension, early weight bearing, and closed kinetic quadriceps strengthening. The purpose of this study was to compare the clinical results of traditional rehabilitation to the accelerated program that is utilized today. From June 1982 to January 1988, 1208 patients underwent intra-articular ACL reconstruction. Those patients who underwent surgery during the June 1982 through December 1986 time frame were assigned to the traditional group and those having surgery in January 1987 or later were assigned to the accelerated group. The clinical factors under consideration included range of motion, ligamentous stability, and isokinetic strength. Unpaired t-tests were used to compare the above clinical factors between the traditional and accelerated groups. The accelerated group was able to regain extension significantly earlier ($p=0.0000$). Ligamentous stability as measured on the KT 1000 was not compromised with the accelerated rehabilitation program. Stability was found to be better ($p=0.024$) in the accelerated group than in the traditional group. Isokinetic strength comparisons between the two groups were not significant. The accelerated rehabilitation program allows the patient to return to their desired activity level with a fully functional and stable knee with approximately six months following reconstruction.

RELIABILITY OF CONCENTRIC AND ECCENTRIC MEASUREMENTS OF QUADRICEPS PERFORMANCE USING THE KIN-COM DYNAMOMETER: THE EFFECT OF TESTING ORDER FOR THREE DIFFERENT SPEEDS.

Wilhite MR, Cohen ER, Wilhite SC, Hahnemann University, Philadelphia, PA, Widener University, Chester, PA (Pro-

gram in Physical Therapy, MS 502, Hahnemann University, Broad and Vine, Philadelphia, PA 19102).

The purpose of this study was to determine the reliability of measures of peak torque (PT), average torque (AT), and the joint angle at which PT occurred (JA), using the KIN-COM dynamometer to test the quadriceps muscle at three different concentric and eccentric speeds (60, 120, and 180 degrees/sec). Eighteen healthy subjects (14 females, 4 males) between the ages of 22 and 37 who had no prior experience using the KIN-COM and were not engaged in strength training were selected for the study. Three subjects were randomly assigned to each of the six possible orderings of the three speeds, and each subject repeated the test order over three consecutive trials at weekly intervals at the same time of day. Each trial consisted of a standardized pre-test protocol, followed by four maximal repetitions at each of the three speeds, with the subject positioned in sitting.

Reliability of each of the measures across trials was determined by means of intraclass correlations. ICC's for concentric and eccentric PT and AT ranged from .89 to .98 and were highly significant ($p \leq .01$) for all three speeds, collapsed across testing order. When testing order was analyzed, those subjects who began testing at 180 degrees/sec demonstrated a lower degree of reliability than those who experienced the high speed as either the second or third speed within each trial. For example, ICC's for PT and AT at 180 degrees/sec ranged from .14 to .68 for those subjects who experienced that speed as the second or third speed within each trial. Measures of JA were less reliable than those of PT and AT, with ICC's ranging from -.73 to .84. Only four of the six ICC's for JA were statistically significant.

These results support the reliability of the KIN-COM dynamometer for both concentric and eccentric isokinetic testing of PT and AT for the three selected speeds. However, it appears that testing

order does influence the degree of reliability at the high speed of 180 degrees/sec, suggesting that persons being tested in the clinic be given longer practice periods performing high speeds and/or experience slower speeds prior to being tested at the high speeds. These results also differ from those of a previously published study which indicated a low degree of reliability for eccentric peak torque with slow speed testing on the KIN-COM dynamometer.

ACCELERATION OF TISSUE REPAIR IN SKELETAL MUSCLE

Gillette JH, Mitchell JLA, Northern Illinois University (Physical Therapy Program, DeKalb, Illinois 60115). This work was supported in part by NIH Grant # GM 33841

Ultrasound has been used to treat a variety of soft tissue injuries including muscle. The purpose of this study was to use ornithine decarboxylase (ODC), an enzyme that demonstrates rapid elevation in cells engaged in protein synthesis, proliferation, and differentiation, to index the extent to which ultrasound can effect the rate of tissue repair in traumatized skeletal muscle.

Experimental subjects included 5 blocks of 12 adult female rats of the Wistar strain weighing approximately 240 to 280 grams. Following anesthesia with an i.p. injection of ketamine and xylazine each animal was injected i.m. with 100 ul of 2% lidocaine into each anterior tibialis muscle. The animals were treated 1 hour post-injection and every 12 hours up to the time of sacrifice with either sham-irradiation for 5 minutes (n=20), irradiation with continuous ultrasound at 1.5 watts per square centimeter for 5 minutes (n=20), or no irradiation (n=20). All animals were sacrificed between 4:00 and 6:00 p.m. to avoid any diurnal variation and anterior tibialis muscles were removed and assayed for ODC activity. Untreated animals injected with 2% lidocaine showed a 100-fold increase in peak ODC activity at 30 hours and a 50% decrease in peak activity by 48 hours. Animals treated with ultrasound demonstrated an accelerated rise in peak ODC activity at 24 hours ($p \leq 0.001$) and an accelerated decrease in ODC activity at 48 hours ($p \leq 0.025$). These findings suggest that ultrasound may accelerate repair of traumatized skeletal muscle. Continued research is needed to fully determine the effects of ultrasound on tissue repair as well as the optimal intensity and duration.

THE RELATIONSHIP BETWEEN ANKLE SPRAIN INCIDENCE AND SIMPLE MEASURES OF HUMAN PERFORMANCE IN A COLLEGE BASKETBALL PROGRAM.

Jafett R, Batista E, Hargett G, Vrana N, and Elbaum, L. Department of Physical Therapy, Florida International University (c/o L. Elbaum, Department of Physical Therapy, Florida International University Miami, FL., 33199) Supported in part by an equipment grant from *Hoggan Health Industries*, Draper, Utah.

The purpose of our study was to investigate whether pre-season tests of musculoskeletal performance were associated with a history of ankle sprain, or were reliable predictors of ankle sprain during the subsequent season. Our subjects were the members (13) of the men's varsity basketball team at our University. Preseason measurements included active ankle ROM and strength, two-point discrimination of the sole, single-limb toe and heel standing time, maximum vertical jump, and time for a 40 yard dash. We used several student's tests to determine whether mean values for these measurements were significantly different between those ankles sprained (6) during the season, and those that were free of injury.

We found the group to be heterogeneous in terms of ROM and strength, but homogenous in terms of jumping and running ability. Two point discrimination and strength of the pronator group was significantly decreased ($p \leq .05$) in the ankles with a history of sprain. None of the measures were predictive of sprains during the subsequent season. Our results demonstrate that, although intuitive relationships between sprain and clinical measurements exist, they may not manifest themselves in a small sample. Whole body function is extremely complex, and strategies are employed for high levels of performance in spite of focal weaknesses.

MAGNETOELECTRIC STIMULATION TO PREVENT MUSCLE WASTING AFTER ANTERIOR CRUCIATE LIGAMENT REPAIR

Currier DP, Nyland J, Noteboom T, Kellogg; University of Kentucky; (Div of PT, UKMC, Annex 1, Lexington, KY 40536-0079).

The purpose of this study was to evaluate the effects of induced stimulation to minimize muscle wasting and weakness during the first six weeks after reconstructive surgery for anterior

cruciate ligament. Fifteen patients scheduled for surgery volunteered as controls (n = 3), for neuromuscular electrical stimulation (n = 7, NMES), and for simultaneously combined neuromuscular electrical and magnetic stimulation (n = 5, MES). Torque production of knee extensors and thigh girth measurements were taken before and six weeks after surgery. All patients received 1 hour progressive physical therapy after surgery each day during hospital stay and three times a week as outpatients. Controls did not receive NMES or MES, but others received either for six weeks. Post-surgery measurements showed that girth decreased 8.3% for controls, 0.5% for NMES, and 0.0% for MES. Torque measurements were restricted to two NMES patients who gained 24% and five MES patients who lost 6%. High pulse charge was received for both NMES and MES groups. Patients receiving MES rated NMES treatments as being more painful than MES treatments. Post-surgery NMES and MES treatments can greatly reduce disuse atrophy and minimize torque loss.

RELIABILITY OF BTE WORK MEASUREMENTS,

McClure PW, Flowers KR, Valley Forge Hand Rehabilitation, Phoenixville, Pa. (Hahnemann University, M.S. 502, Broad & Vine St., Philadelphia, PA 19102)

The purpose of this study was to determine the reliability of work measurements obtained using the BTE work simulator for a shoulder and wrist task. The shoulder task was a circumduction movement with the subject oriented 60 degrees to the plane of the motion. The wrist task consisted of reciprocal radial and ulnar deviation with the elbow flexed 90 degrees. Each task was performed with maximal effort for 15 seconds. Work measurements were calculated by the BTE by multiplying the torque generated times the angular displacement.

Both intra-session (2 minute interval) and inter-session (at least 2 days interval) reliability were determined for the shoulder task while only intra-session reliability was determined for the wrist task. Four different therapists participated in testing but each subject was only tested by one therapist. Subjects consisted of 27 normal volunteers and 15 patients for the shoulder task and 22 patients for the wrist task. Intraclass correlation coefficients (1,1) were calculated for each task and various subgroups and ranged from .93 to .99. We conclude that measurements of work using the BTE

each task and various subgroups and ranged from .93 to .99. We conclude that measurements of work using the BTE work simulator and our protocol can be highly reliable both within a session and between sessions at least 2 days apart. These measurements may prove to be useful indicators of functional status although this has yet to be demonstrated.

ACTIVE ANTERIOR TIBIAL SHIFT AND PATH TAKEN BY CENTER OF ROTATION IN A NORMAL AND AN ACL DEFICIENT KNEE.

Wise D, Cryer C, Garcia F, Linane M, and Stubblefield, S. (Univ. of Texas Medical Branch, Galveston, Texas 77550).

Active Anterior Tibial Shift (AATS) is produced by the quadriceps during resisted quadriceps exercises. Though it would seem an extremely important phenomena to physical therapists AATS has thus far only been studied by indirect means. It has been proposed that AATS should be less during "closed chain" knee extension exercise compared to "open chain" knee extension but this point has not been validated. The purpose of this study was to determine AATS using a more "direct" mode than has been previously attempted. Videofluoroscopy (VFX) studies were conducted on 2 subjects, one with a "normal" knee and one with an ACL deficient knee. Both were placed in a side lying position with the R lower extremity lying lateral

side up on a specially built table. A first set of VFX recordings were taken as each subject held his knee isometrically at the 30 degree flexion position against a 360 in. lb. resistance. The subject first held under open chain conditions and then under closed chain conditions. VFX recordings were taken as the subject extended the knee in the open chain mode from 45 to 0 degrees flexion. A 360 in. lb. resistance torque was maintained throughout the movement. The first set of VFX recordings were evaluated by 5 examiners who used a method of tangential lines to compare the anterior displacement of the tibia under three conditions: (1) No resistance; (2) Open chain; and (3) Closed chain. Results showed: (1) AATS occurred in both knees; (2) AATS was found to be greater in absolute magnitude in the ACL deficient knee than in the normal knee; (3) The difference in AATS between open and closed chain was greater for the "normal" knee; and (4) The examiners' measurements showed high reliability. The path taken by the center of rotation was plotted for the second set of VFX using a method advanced by Frankel, et.al. Considerable differences were noted in centrode path between subjects. Surface velocities plotted for the normal knee were tangential to the joint surface while those for the ACL deficient knee were not.


Section News
(Continued from page 26)

We on the Practice Affairs Committee would be interested in hearing your thoughts on these issues. Especially, we are interested in gaining more input from other military physical therapists to see if our impressions are consistent. Please address correspondence to:

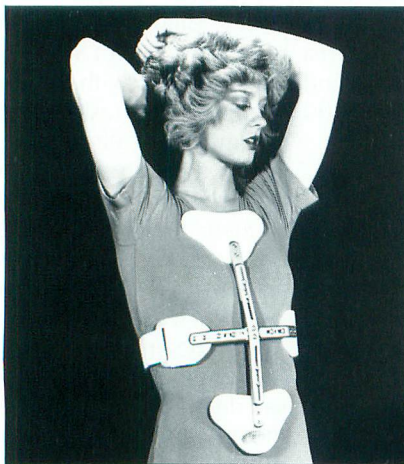
Garvice Nicholson, MS, PT
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THE SHOULDER
Sandy Burkart, P.T., Ph.D.

THE WRIST AND HAND
Carol Waggy, P.T. and David Labosky, M.D.

MEETING B:

March 8-11 ♦ **August 8-11**

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THE LOW-BACK/SI JOINT/HIP
James Porterfield, P.T., M.A. and Carl DeRosa, P.T., M.S.

THE KNEE
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— ANNOUNCING —



The Orthopaedic Section, APTA, Inc. will celebrate **15 Years of Growth and Service to the Profession** on Saturday, February 3, 1990. This gala event will take place at the Combined Sections Meeting, to be held at the New Orleans Hilton Riverside from 7:00 to 11:00 P.M. The evening will include a reception and sumptuous dinner and feature the internationally known singer, Nancy Wilson, in private concert. Cost for the entire evening is \$100 per person or \$1,000 per table. Corporate sponsorship of \$5,000 includes a table for 10. All proceeds from the evening will be donated to the Minority Scholarship Fund of the Foundation for Physical Therapy.