Foot and Ankle Special Interest Group

Orthopaedic Section, APTA, Inc.

CHAIR'S REPORT

Since our first formal meeting in Reno, myself, Steve Reischl (Vice-Chair), and Mark Cornwall (Secretary/Treasurer) have been busy with the organization of the upcoming FASIG educational meeting for CSM in Atlanta, publicizing the FASIG to health professional organizations outside of the physical therapy profession, as well as getting the three standing committees of the FASIG operational. All three of us our quite happy with how things have progressed to date.

At the business meeting in Reno, the members in attendance voted for the formation of the following three standing committees; Programming, Practice, and Research. As stated in our bylaws, the FASIG Vice-Chair, Steve Reischl, is the chair of the six member Programming Committee. Upon returning from Reno, I asked Irene McClay and Joe Tomaro, to chair the Research and Practice Committees, respectively. Although they both have extremely busy schedules, they agreed to serve as committee chairs. At the present time, the Research committee has eight (8) members and the Practice committee has seven (7) members. Although only in existence for a short time, all three of the committees have been extremely busy addressing issues that have developed in the past several months. I cannot thank Steve, Irene, Joe, and their committee members enough for all the work they have done in getting their respective committees off the ground. The various activities of each committee is summarized below and as can be seen, they have been extremely active.

As part of my duties as Chair, I felt it was important to publicize the formation and objectives of the FASIG to health care professionals involved with the care of the foot and ankle outside of the physical therapy profession. In May, I sent letters to the Presidents of the following four foot and ankle health care organizations: American Orthopaedic Foot and Ankle Society, American Podiatric Medical Association, Prescription Footwear Association, and the American College of Foot and Ankle Orthopaedics and Medicine. In addition, I also have communicated with Dr. Gerald Webber, who is the Editor of *The Lower Extremity*, which is the journal of the podiatric specialists. Part of my report at the FASIG business meeting at CSM in Atlanta will discuss the responses I have received from these letters.

Also at our business meeting at CSM in Atlanta, *we will be electing a Vice-Chair as well as two Nominating Committee members.* If you are interested in running for these positions, please contact Irene McClay (302-831-8910), Michael Mueller (314-286-1400) or myself (520-523-1499) by December 15, 1995.

In closing, I want to invite you to join and participant in the FASIG. Please join us for both the business and educational meeting that will occur at CSM in Atlanta. As you will read, Steve and his committee have put together an excellent program that will no doubt prove stimulating and informative. If you have any questions or suggestions regarding the FASIG, please do not hesitate to contact me by either phone (520-523-1499) or FAX (520-523-9289). I look forward to seeing you in Atlanta!!

Tom McPoil
Chair, FASIG

OFFICERS/COMMITTEES
FASIG

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Steve Reischl	phone (310) 427-2225
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Mark Cornwall	phone (602) 523-1606
Research Committee:	
Irene McClay	phone (302) 831-8910
Practice Committee:	
Joe Tomaro	phone (412) 321-2151
Programming Committee:	
Steve Reischl	phone (310) 427-2225

PROGRAMMING COMMITTEE REPORT
FASIG PROGRAM at CSM, ATLANTA

The business meeting for the FASIG will be held on Saturday, February 17, 1996 from 12:30 to 1:30 p.m. The educational session which will take place immediately following the business meeting and ends at 5:30 p.m. Steve Reischl will serve as the Moderator for the afternoon session. The format for the educational session will be a 30 minute formal presentation by each speaker followed by a 30 minute discussion period. The speakers and topics for this years program include:

1:30-2:30 p.m.—
The Inverted Orthotic Technique
Presenter: Stephen Baitch, PT

3:30- 4:30 p.m.—
Tibialis Posterior as a Culprit of Heel Pain
Presenter: Catherine Patla, MMSc, MTC, PT, OCS

4:30-5:30 p.m.—
Biomechanical Constraints of Foot an Ankle Contributing to Abnormal Patterns of Movement
Presenter: Beth Fisher, MS, PT, NCS

FUTURE PROGRAMS

The FASIG is planning to co-host a one day workshop with the Department of Kinesiology, University of Minnesota and Novel Electronics, Inc., on Saturday, June 16, 1996, in Minneapolis, MN. This is the day before the start of the 1996 APTA National Meeting in Minneapolis. The workshop will be titled, "The Use of Plantar Pressure Assessment in Physical Therapy Practice and Research," and will consist of both panel discussions and "hands-on" labs using pressure assessment instrumentation. While the workshop is still in the planning stage, final information and registration forms will be provided in the next issue of *Orthopaedic Practice*. Please plan on attending this workshop, especially if you will be attending the APTA National Meeting in Minneapolis.

Finally, the FASIG Programming Committee is planning on holding a preconference workshop prior to the 1997 CSM in Dallas. The title of the workshop will be:

"THE USE OF FOOT ORTHOSES IN TREATMENT OF PATELLOFEMORAL PROBLEMS"

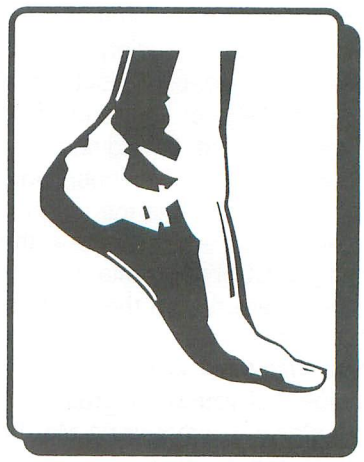
The programming committee has been working closely with Lola Rosenbaum, Education Program Chair of the Orthopaedic Section, and has already contacted several speakers with tremendous clinical and research expertise in this topic area. While the planning is still in the preliminary stages, this promises to be an excellent program. Further information will be provided in future *Orthopaedic Practice* issues, regarding this exciting workshop.

RESEARCH COMMITTEE REPORT

The research committee is attempting to put together a database of those members interested or involved in foot and ankle research. The purpose of this database is to provide enhanced networking among members of the FASIG and the Orthopaedic Section. To help get the database off the ground, Irene and her committee have developed a "short" survey which is attached. The survey form is pre-addressed, so all that is required is for you to fold and seal the survey form with tape, then mail. Please help Irene and her committee establish this data-base by taking a few minutes to fill out and return the survey.

PRACTICE COMMITTEE REPORT

In April, I asked the Practice Committee to review a Terminology Standards document which was developed by the Terminology and Measurement Committee of the American Orthopaedic Foot and Ankle Society as well as the Pediatric Orthopaedic Society of North America. The Terminology Standards document had been obtained by Jonathan Cooperman from Dr. Ian Alexander, who was a member of the committee. Dr. Alexander had asked Jonathan to comment on the document. Upon receiving the document from Jonathan, I sent it to Joe Tomaro, so he and his committee could read and comment on the proposed foot and ankle terminology being proposed by our orthopaedic surgeon colleagues. Joe has composed an excellent summary of the original terminology document as well as feedback provided by committee members and himself regarding the proposed terminology. Joe's summary is included in this issue. I strongly believe that Joe's summary is important for all of us to read, since we should be familiar with the terminology that may be used by the orthopaedic surgeon who is referring a patient to the physical therapist!



FOOT AND ANKLE TERMINOLOGY

By Joe Tomaro, MS, PT, ATC
Chair, Practice Committee, FASIG

Overuse injuries of the lower extremity can be caused by multiple factors including abnormal foot and ankle biomechanics. Evaluation and treatment of foot and ankle biomechanics are performed by many professionals including physicians, podiatrists, physical therapists, and athletic trainers. One of the difficulties of communication among medical professionals is the lack of standard nomenclature when discussing foot and ankle biomechanics. Root et al. defines triplane motion about the subtalar joint as pronation and supination. Kapandji defines the same triplane movement about the subtalar joint as eversion and inversion. This is just one example where differences in nomenclature can affect communication between professionals treating the foot and ankle complex.

Recently the Terminology and Measurement Committee of the Orthopaedic Foot and Ankle Society developed definitions for clinical conditions and motion of the foot and ankle with the goal of creating standards to facilitate communication among foot and ankle surgeons. It is important that we as physical therapists understand these definitions and how they may differ from terminology that we typically use. Listed below are the definitions as set forth by the Terminology and Measurement Committee of the Orthopaedic Foot and Ankle Society.

CLINICAL CONDITIONS

HINDFOOT- The portion of the foot proximal to the transverse tarsal (talonavicular and calcaneocuboid) joints.

MIDFOOT- The portion of the foot between the transverse tarsal (talonavicular and calcaneocuboid) joints and the tarsometatarsal joints.

FOREFOOT- That portion of the foot distal to the tarsometatarsal joints.

HINDFOOT VARUS- From the posterior view, frontal (coronal) plane angulation of the central heel line to a line* inwards with respect to the midline of the lower leg.

HINDFOOT VALGUS- From the posterior view, frontal (coronal) plane angulation of the central heel line* outwards with respect to the midline of the lower leg.

FOREFOOT VARUS- Frontal plane rotation of the plantar aspect of the forefoot towards the midline of the body such that the medial forefoot is elevated relative to the lateral forefoot.

FOREFOOT VALGUS- Frontal plane rotation of the plantar aspect of the forefoot away from the midline of the body such that the lateral forefoot is elevated relative to the medial forefoot.

MIDFOOT ADDUCTUS- Medial deviation (towards the midline of the body) of the midfoot relative to the hindfoot in the transverse plane.

MIDFOOT ABDUCTUS- Lateral deviation (away from the midline of the body) of the midfoot relative to the hindfoot in the transverse plane.

FOREFOOT ADDUCTUS- Medial deviation (towards the midline of the body) of the forefoot relative to the midfoot in the transverse plane.

FOREFOOT ABDUCTUS- Lateral deviation (away from the midline of the body) of the forefoot relative to the midfoot in the transverse plane.

HAMMER TOE- Deformity of the toe with MTP in extension or neutral, PIP flexion and DIP extension or neutral.

CLAW TOE- Deformity of toe with MTP in extension or neutral and both PIP and DIP flexion.

MALLET TOE- Deformity of toe with MTP neutral, PIP neutral and DIP flexion.

*The central heel line is a proximally to distally directed line that bisects the posterior aspect of the calcaneus.

MOTIONS OF THE FOOT AND ANKLE

SAGITTAL PLANE

Dorsiflexion—Upward motion of the distal bony part relative to the proximal bony part in the sagittal plane.

Plantar flexion—Downward motion of the distal bony part relative to the proximal bony part in the sagittal plane.

FRONTAL (CORONAL) PLANE

Inversion—Inward tilting motion of the plantar aspect of the part toward the midline.

Eversion—Outward tilting motion of the plantar aspect of the part away from the midline.

TRANSVERSE PLANE

Forefoot/Midfoot

Adduction—Medial deviation of the forefoot/midfoot in the transverse plane towards the midline.

Abduction—Lateral deviation of the forefoot/midfoot in the transverse plane away from the midline.

Ankle/hindfoot

Internal rotation—Inward rotation of the talus or calcaneus in the transverse plane relative to the proximal bony part.

External rotation—Outward rotation of the talus or calcaneus in the transverse plane relative to the proximal bony part.

TRIPLANE MOTIONS

Supination—A combination of adduction, inversion and plantar flexion.

Pronation—A combination of abduction, eversion and dorsiflexion.

There are several definitions which lack clarity or differ from terminology that is typically used by physical therapists. Hindfoot varus, hindfoot valgus, forefoot varus and forefoot valgus have accurate descriptions but do not make mention of these being osseous malalignments. There is also a lack of a reference position in which to define these alignments. A reference position is important in order to allow for consistent definition. For example, hindfoot varus and hindfoot valgus are determined with the subtalar joint in a neutral position. Forefoot varus and forefoot valgus are usually defined as the relationship of the central three rays to the perpendicular of the bisection of the calcaneus with the subtalar joint in neutral and the midfoot fully loaded.

Some confusion may also exist as to the use of the terms hindfoot varus and hindfoot valgus. Commonly the terms calcaneal varus and calcaneal valgus are used to define the relationship of the bisection of the calcaneus to the bisection of the lower leg.

When defining the motions about the foot and ankle, sagittal plane movement is typically referred to as dorsiflexion and plantar flexion while frontal plane movement is defined as inversion and eversion. It seems confusing that the Terminology and Measurement Committee of the Orthopaedic Foot and Ankle Society defines transverse plane movement about the forefoot/midfoot as adduction and abduction but transverse plane movement at the ankle and hindfoot as internal rotation and external rotation. Typically, the transverse plane movement at all segments of the foot and ankle complex are referred to as adduction and abduction in the physical therapy literature. It is also important that some form of terminology be developed to better define the position of the foot and ankle in the closed chain.

We should continue our efforts to consistently define the motion about the foot and ankle complex. Gaining an understanding of the terminology that is used by other professionals will help to foster improved communication among individuals treating foot and ankle dysfunction.