

FOOT & ANKLE

SPECIAL INTEREST GROUP

President's Corner

Entry-level Curriculum Update

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Since 2011, the FASIG membership has directed most of their energy and resources toward developing a mechanism to assist in the delivery of foot and ankle education. Comprised of both academic and clinical specialists, the FASIG was motivated by maximizing the information available to orthopaedic instructors, and in turn, maximize the exposure to foot and ankle content to entry-level students. The FASIG members decided to create a document that referenced all available research regarding foot/ankle examination and treatment, combined with curriculum-based laboratory examples and case studies that would act as a useful tool for orthopaedic instructors. Thus, FASIG membership began creating "Foot and Ankle Curriculum Guidelines for Entry-level Physical Therapists."

Currently, this guide is in the proofreading stage, ensuring a format consistent with existing curriculum yet up-to-date regarding research. Several hours of preparation by many foot and ankle specialists has resulted in an impressive document. Input is always welcome and we encourage all Section members to access the current version of the guidelines through the Orthopaedic Section website at www.orthopt.org.

Ankle Sprains: Brace vs Rehab vs Research Design

Physical therapists often encounter patients who suffer an ankle sprain. While ankle sprain is the most common sports-related injury with a high rate of recurrence, it is also a common nonsports-related injury. Therefore, physical therapists in many different domains and work settings should be aware of recent literature that might direct their care. At the same time, physical therapists should be cognizant of how the research itself is generated, presented, and rationalized. This column looks at research related to this patient-care decision: Should a patient with recurrent ankle sprain undergo a course of physical therapy, wear an external brace, or both?

Clinical Practice Guidelines (Ours)

When it comes to ankle sprains, the physical therapist should turn to our very own Clinical Practice Guidelines.¹ This comprehensive document reviews over 250 scholarly articles related to the examination and treatment of ankle sprains and provides a framework for gauging effectiveness of interventions. *Quality* of research is considered and is weighted heavily when clinical decisions are at stake. This document should be the primary resource for physical therapists who desire "best practice" decision-making. I have a copy on my desk; it is worn and torn.

Regarding rehabilitation and bracing for patients with ankle sprain, the Guidelines are clear.

1. Balance and proprioceptive training, dynamic warm-up, general stretching, and therapeutic exercises are strongly recommended. Restoration of range of motion, especially dorsiflexion, is important.

2. The frequency of ankle sprain is reduced by the use of external supports, bracing, or taping and these treatments are most effective in those with previous ankle sprain injuries.

Clinical Practice Guidelines (Theirs)

Kerkhoffs et al² recently published a consensus statement regarding diagnosis, treatment, and prevention of ankle sprains and produced an evidenced-based guideline. Like its American counterpart, the recommendations were based on systematic reviews and the conclusions were clear.

1. It is recommended to train balance and coordination, especially among athletes, starting within 12 months after the occurrence of the injury.
2. Exercise therapy should be included as much as possible into regular training activities or at home to prevent recurrences or both.
3. It is recommended to use a brace or a tape to prevent a relapse.

A Recent Study

A recent article related to the use of bracing and exercise for recurrent ankle sprains caught my eye, with regard to the methodology and implications. Janssen et al³ investigated the role of external ankle braces on the long-term prevention of recurrent ankle sprains, further comparing braces against "neuromuscular training" and the use of both exercise and bracing.

Janssen et al³ assessed 384 athletes, aged 18 to 70, who had sustained a lateral ankle sprain, and randomly assigned them to 3 groups; a training group, a brace group, and exercise with bracing (combi group). The training group received an 8-week home-based neuromuscular training program, the brace group received a semirigid ankle brace to be worn during all sports activities for 12 months, and the combi group received both. The main outcome measure was self-reported recurrence of ankle sprain. At one-year follow-up, 69 participants (20%) reported a recurrent ankle sprain: 29 (27%) in the training group, 17 (15%) in the brace group, and 23 (19%) in the combi group. Janssen et al³ concluded that bracing was superior to neuromuscular training in reducing the incidence, but not the severity, of self-reported recurrent ankle sprains.

A closer look at the implementation of the neuromuscular training intervention suggests significant differences from exercise regimens which might include emphasis on ROM, proper warm-up, and stretching. In the Janssen et al study,³ participants in the neuromuscular training group received an 8-week home-based program, involving 3 training sessions a week, with a maximum duration of 30 min/session. An instructional DVD was provided. A balance board was provided. Compliance was self-reported. Subjects undergoing both bracing and the exercise program ceased exercise at 8 weeks. Patients in this study were recruited online and their home-based exercises were not supervised.

Implications

The findings of Janssen et al³ seemed to contradict a consensus statement published one year earlier by denouncing rehabilitation as second to the brace as a single preventive measure against recurrent ankle sprain. This contradiction can be understood by poor research methodology—even the group that underwent exercise and bracing had more recurrent sprains than the brace group! The trickle-down of this invalid finding is potentially damaging to patients and physical therapists:

1. Does the physician who reviews abstracts of articles in the literature interpret this study as suggesting that physical therapy and rehabilitation is no longer needed and a brace is just as effective? (Ironically, an orthopedic surgeon referred me to this article.)
2. Does the physical therapist who reviews articles in the literature notice that of the 24 cited articles in the Janssen et al¹ study, none were authored by physical therapists?

I, for one, will forward this review to local physicians, because it is imperative that the role of rehabilitation not be misrepresented by the article title, Bracing is superior to neuromuscular training for the prevention of self-reported recurrent ankle sprains: a 3-arm randomized controlled trial. For the practicing orthopaedic physical therapist, neuromuscular training is much more than a balance disk.

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