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## Braces superior to tape for ankle injuries among football players

Braces appeared to reduce the injury severity, based on more rapid return to play

by John Miller

ORTHOPEDICS TODAY correspondent

VANCOUVER, British Columbia—Braces appear to be significantly superior to tape in preventing ankle injuries in football players, based on a study that compared injury rates in 300 athletes over an eight-year period at Wake Forest University.

Players who wore braces were 2.5 times less likely to be injured during games and 2.7 times less likely to be injured during practices, and returned to play on average two days sooner than injured players who had been using protective tape (six vs. eight days).

**D. Monte Hunter, MD**, and colleagues at Wake Forest University Baptist Medical Center presented their findings here at the 24th annual meeting of the American Orthopaedic Society for Sports Medicine.

"Ankle sprain is considered the most common injury in sports, and accounts for 25% of athletes' time lost from participation," Hunter said. "Consequently, prevention of ankle injury represents a major issue in sports medicine."

Hunter explained that the study followed the effectiveness of taping com-

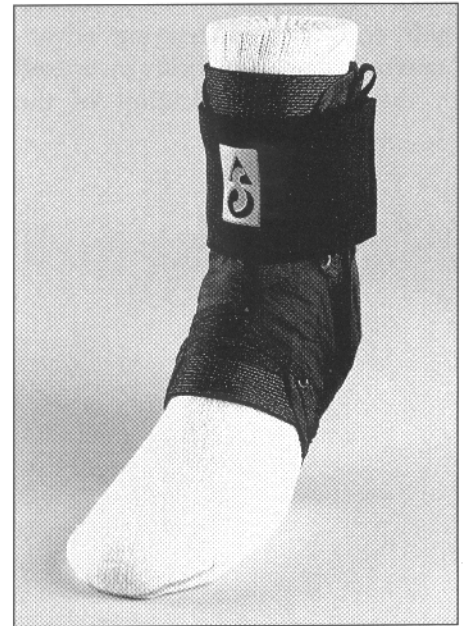
pared to bracing between spring 1988 and fall 1995. While all the players were required to have some type of ankle support, they were allowed to choose types, with 52% selecting tape and 48% opting for braces.

Of 158 ankle sprains, 115 occurred among players wearing tape. Players wearing braces sustained 43 ankle sprains during the course of the study, which included 89 games and over 1400 practices.

### Shoewear not significant

In contrast to a retrospective review completed in 1988 by the Wake Forest sports medicine group that found some benefit to using a combination of braces and low-top shoes, the recent study found no statistically significant impact from low- vs. high-top shoes, Hunter told *ORTHOPEDICS TODAY*. The study also found that the level of player experience had no bearing on the rate of injury.

Hunter added that braces appeared to reduce the severity of injuries, based on more rapid return to play. "One can infer from the study that players who were wearing braces were less severely injured," he stated. "Whether that's sta-



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**Ankle braces like the Ankle Stabilizing Orthosis by Medical Specialties Inc. offer football players better protection against ankle injuries compared to tape, according to a team of investigators at Wake Forest University.**

tistically valid is something we're still looking at."

Other studies have confirmed that tape provides some protection from injury, especially compared to no support; however, the tape tends to become loose during activity, Hunter noted. Some studies have found tape loses 40% of its initial support after just 10 minutes of exercise.

### Educating players and coaches

Hunter suggested the study results should be made available to coaches and players, especially high school and recreational athletes. With the data

confirming the benefits of braces, use of these protective devices is likely to increase, he added.

"Because of the inherent biases that coaches and players hold, we don't insist they choose one over the other; we encourage players to choose the type of support they are most comfortable with. But we feel very comfortable that they are getting adequate and better protection with the braces because the braces can be frequently retightened during practices and games," Hunter said.

Another benefit to using braces: their cost- and time-saving advantages over tape. Players are instructed in the proper application of the

braces and can apply the braces themselves. A set of braces costs approximately \$40, and players use an average of two sets of braces per season, Hunter pointed out. Taping, on the other hand, requires the time and expertise of an athletic trainer, and the costs to tape a player for practices and games over an entire season can total more than \$400.

Hunter noted that during the 1980s when the Wake Forest group first looked at the issue, players at Wake Forest—which is an NCAA Division I school—selected taping two-to-one over bracing. Toward the end of the recent study, player preference was about evenly split.

Hunter noted that the study did not attempt to compare biomechanical properties of one type of brace vs. another. More than 35 different braces are currently marketed.

The study brace was the Ankle Stabilizing Orthosis (ASO), marketed by Medical Specialties Inc., of Charlotte, N.C. It is a nylon, lace-up style, ankle-stabilizing device with two inelastic, nylon support straps and an elastomeric cuff with Velcro closure.

Co-investigators included **C. Steven Yates, ATC; Gregory B. Russell; Walton W. Curl, MD; Douglas C. Browning, MD, ATC; and David F. Martin, MD.** ■