



TOPICALGEAR

What Best Protects the Inverted Weightbearing Ankle Against Further Inversion?

Evertor Muscle Strength Compares Favorably with Shoe Height, Athletic Tape, and Three Orthoses

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CONCLUSIONS

1. For an adult male ankle at 15° of inversion, the fully active evertor muscles, acting isometrically, can provide more than three times greater protection against an ankle inversion injury than tape or an orthosis worn inside a three-quarter-top shoe.
2. At 15° of inversion no meaningful differences were found in the total eversion moments developed in the taped or braced ankle in the low-top shoe; similar results were obtained for the three-quarter-top shoe.
3. When the evertor muscles are inactive, calculations show a three-quarter-top shoe will increase the baseline resistance to inversion by a factor of 1.42 (or 6 N-m); when the shoe is worn with the orthoses or tape used in this investigation, the support will increase the baseline ankle resistance by a factor of 1.77 (or 11 N-m). The choice between the type of support can therefore be made on the basis of comfort, convenience, and cost.
4. Precontracted and strong evertor muscles appear to be the most effective form of ankle protection at footstrike.