



Q/ How can we minimize recurrent ankle sprains?

EVIDENCE-BASED ANSWER

A/ USING EXTERNAL ANKLE SUPPORTS during physical activity significantly reduces the likelihood of primary and secondary sprains (strength of recommendation [SOR]: **A**, systematic review).

Proprioception rehabilitation substantially decreases further injury after an ankle sprain (SOR: **A**, 3 randomized control trials [RCTs] and 1 prospective cohort study).

Evidence summary

A Cochrane review of 14 randomized and quasi-randomized trials concluded that patients who used external ankle supports, such as semi-rigid orthotics or air cast braces, suffered significantly fewer ankle sprains than controls (relative risk [RR]=0.53; 95% confidence interval [CI], 0.40-0.69; number needed to treat [NNT]=22).¹ Participants in the trials ranged in age from adolescence to middle age and were either at risk of injury or had suffered a previous ligament injury.

The benefits of ankle supports were most apparent in patients with previous injuries but still evident in patients who hadn't been injured. External ankle support is recommended for sports with a high risk of ankle injury, such as soccer and basketball, but the decision to use it should be based on perceived risk of injury as opposed to perceived loss of performance.¹

Research is insufficient to support wearing high-top shoes to prevent primary and secondary ankle sprains.

Also helpful:

Balance and proprioceptive training

A systematic review of 2 RCTs with 703 and 1057 patients concluded that completing a minimum of 6 weeks of balance and coordination training after an acute injury substantially reduced the risk of recurrent ankle

sprains for as long as a year (NNT=22; absolute risk reduction=4.5%).²

Proprioceptive training appears to effectively prevent primary and secondary ankle injuries but is more beneficial for patients with a previous ankle injury. A recent RCT that enrolled 522 active sports participants with recent ankle injuries found that those who completed an 8-week, self-guided, proprioceptive training program suffered significantly fewer recurrent sprains at 1 year than the control group (22% vs 33%; relative risk reduction=35%; NNT=9).³

Recommendations

The American Orthopaedic Society for Sports Medicine continues to endorse rest, ice, compression, and elevation for optimal initial care of ankle sprains.⁴ The American College of Sports Medicine suggests that rehabilitation after an ankle injury should include guided stretching and strengthening of the ankle joint as well as balance training to prevent future injuries.⁵ Both groups also recommend external ankle supports instead of taping to prevent ankle reinjury.^{4,5}

JFP

References

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