

# Taping versus Bracing for Lateral Ankle Sprains

Ankle sprains are one of the most common sports injuries and can result in significant time away from training and games. Most ankle sprains are inversion injuries when the foot rolls inwards with either complete or partial tearing of the lateral ligament complex on the outside of the ankle.



Ankle bracing and taping is a method that is often used to decrease the number and severity of these injuries or provide support to the ankle when returning to sport, especially in athletes with a history of ankle sprains, but which is better, taping or bracing?

A trial by Lardenoye et al in 2012, assessed semi-rigid bracing and taping and found that patients in the bracing group rated their satisfaction and hygiene, higher but the scores for range of motion, pain, swelling, instability, stiffness, stair climbing, running, work activities and support, was not different between the two groups.



Overall this study seems to support that ankle sprain patients who are treated with semi-rigid ankle braces are more satisfied with their treatments than those who are treated using tape. These results must be interpreted cautiously for clinical use as there are many ways to tape an ankle and many different ankle braces available on the market. Clinically though, this data suggests that while bracing after an ankle sprain leads to better patient satisfaction, there is no functional differences between those receiving tape versus bracing.

A study in 2015 by Kemler et al also supports this. 4 weeks of soft bracing was compared with 4 weeks of taping in 157 patients with acute lateral ankle sprains. The ankles were assessed again after 1 year and the recurrence of ankle sprains and residual symptoms were found to be similar in both groups.

Most studies have shown that braces are slightly more effective than taping and both are better than no support. Logically an external support should stiffen the joint and increase the structural stability of the ankle, making the ankle less

susceptible to inversion. This is true to some extent, but at least one classic study has shown that regular taping can lose much of its supportive effect after only short periods of exercise. So then how does taping or bracing decrease the incidence and severity of sprains?

Proprioception is the ability to sense the relative position of a body part. It was thought that the traction and/or pressure felt on the skin of the foot and ankle from the taping or bracing improved sensory input and thus improved proprioception, resulting in fewer ankle sprains. Research has shown that taped participants had improved proprioception both before and after exercise compared with untaped participants.

A common concern is that prolonged taping or bracing of the ankle can cause weak ankles that are more prone to injury however research has shown that this is not the case. Braces offer several advantages in that they are self-applied, reusable, and re-adjustable with less skin irritation than tape. Taping needs to be applied correctly, often by a physiotherapist. Braces are likely more cost-effective than taping for long term use.



Disadvantages of bracing include the fact that many athletes feel less comfortable or stable when wearing braces than they do when the ankle is taped. Braces can also become torn or lost and require replacement and their initial cost is higher.

Ankle bracing and taping should not be the only treatment used for ankle sprains but as part of a rehabilitation program which can include manual therapy, range of movement, strengthening and proprioceptive exercises. If you have any questions, contact your physiotherapist.

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