Lay summary

Netball is the most popular team sport in Australia. In netball, the incidence of injury is about 14 injuries per 1,000 player hours. External ankle support to prevent ankle injuries has shown to be effective and most teams demand that their players either wear tape or an ankle brace to all training sessions and games. While these external ankle supports can protect against ankle sprains, there is some evidence that they can increase the loading on the knee joint and increase the risk for injury.

The aim of this study is to determine how bracing and footwear influence the loading on the ankle and knee joint.

Conclusions:

Knee and ankle loading are increased when wearing a brace compared to the other shoe conditions (netball shoes and high top shoes) during side stepping. During landing, external ankle support (brace or high top shoe) did not changes the knee loading but increased the ankle inversion moment compared to the other shoe conditions. Both ankle flexion and inversion/eversion range of motion are restricted by the brace and the high top shoes in landing and side stepping.

Although braces and high top shoes restrict the movement during landing and side stepping, the increased loading on the ankle and the knee could lead to further injuries.