

Effects of External Ankle Support on Knee and Ankle Joint Loading in Netball Players

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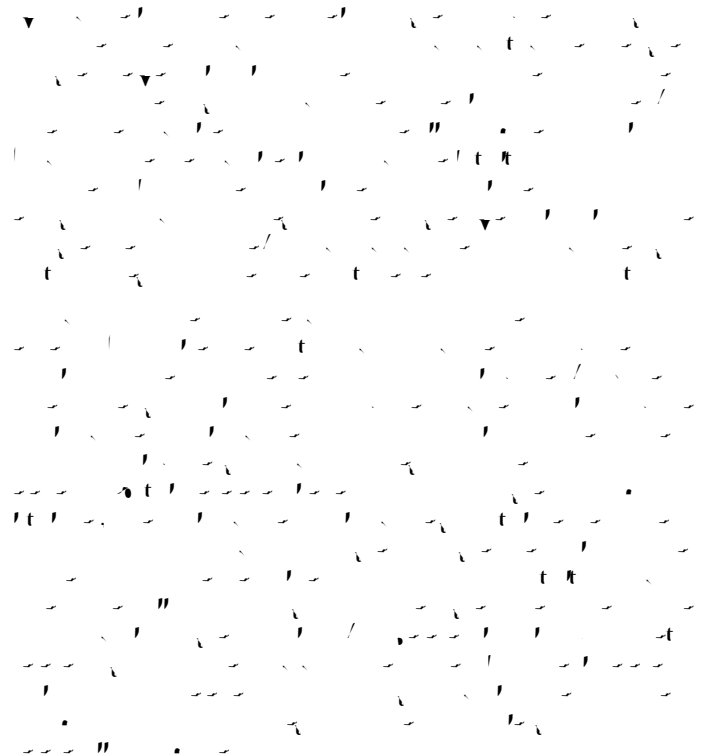
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Abstract

This study investigates how external ankle support devices influence knee and ankle joint loading in netball players. External ankle supports, such as braces and taping, are commonly used in sports to enhance stability and prevent injuries, but their impact on joint loading remains under-explored. A total of number netball players participated in this study. Each participant performed a series of dynamic movements, including cutting and jumping tasks, both with and without external ankle support. Joint loading was assessed using a combination of force plates and motion capture systems to measure the forces exerted on the knee and ankle joints during these activities. Results indicated that external ankle support significantly altered joint loading patterns. Specifically, the use of ankle braces reduced peak ankle joint forces and decreased knee joint loading compared to no support. The reduction in joint forces was accompanied by improvements in joint stability and a decrease in the risk of overloading, particularly during high-impact activities. These findings suggest that external ankle support devices can effectively reduce joint loading in both the knee and ankle, potentially lowering the risk of injury and enhancing performance in netball players. This study underscores the importance of incorporating appropriate ankle support into training and competitive pld

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Conclusion

The study found that external ankle support significantly reduced knee and ankle joint loading in netball players during various activities. This suggests that such support can be a valuable tool for injury prevention and performance enhancement in this sport. Further research is needed to explore the long-term effects and optimal design of external ankle support.