INTRODUCTION
Knee injuries are prevalent among athletes across a multitude of sports whether it be females or males. Restricted joint motion above or below the knee joint can contribute to the incidence of these injuries during static or dynamic movements.

Focused Clinical Question
Can restricted ankle dorsiflexion cause knee kinematic changes during static and dynamic movements in physically active adults?

Search Strategy
Sources: PubMed, ScienceDirect, EBSCOhost
Search Terms: ankle dorsiflexion, knee kinematics, ankle mobility, and knee injuries
Inclusion: available in English, static and dynamic movements, weight-bearing ankle dorsiflexion lunge test, knee kinematics as outcome measure
Exclusion: chronic ankle instability, Kinesio taping, X-taping, original athletic tape, weight-bearing activities not performed, dorsiflexion not measured in weight-bearing position, previous knee or ankle injury, and kinematic changes after ACL reconstruction

Evidence of Quality Assessment
The literature was searched for the best evidence as determined by the Physiotherapy Evidence Database having an outcome of a 7/10 that assessed ankle dorsiflexion and knee kinematic changes throughout different movement patterns

Results
The evidence assessed suggests that restricted ankle dorsiflexion, independent of other factors, may be related to changes in knee kinematics and the incidence of knee injuries in physically active adults. Other factors such as lower extremity strength of quadriceps, hamstrings, and core stability need to be considered in a knee injury prevention plan as it can play a role in ankle and knee kinematics during static and dynamic movements.

Clinical Bottom Line
The evidence assessed suggests that restricted ankle dorsiflexion, independent of other factors, may be related to changes in knee kinematics and the incidence of knee injuries in physically active adults. Other factors such as lower extremity strength of quadriceps, hamstrings, and core stability need to be considered in a knee injury prevention plan as it can play a role in ankle and knee kinematics during static and dynamic movements.

References

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