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Original Research Article

A review of the Ankle Joint Movement in People with Ankle Instability

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ABSTRACT

Introduction: Chronic ankle instability is usually caused by recurrent ankle sprains. It is estimated that about 70% of people with the first external ankle sprain develop chronic ankle instability. The purpose of this article is to review the background of studies on the variability of ankle joint movement pattern and neuromuscular control strategies in individuals with functional ankle instability. **Methods:** Articles in reputable databases such as ProQuest, Pubmed Medline, Science Direct were searched for words, functional ankle instability, variability, gait, and neuromuscular control, from 1960 to the end of 2021 **Results:** Based on the results, issues such as ankle joint movement pattern in healthy individuals and people with chronic ankle instability, closed-loop mechanism [reactive], open-loop mechanism [pre-movement] and their role in complete ankle joint instability Were explained. **Conclusion:** The results presented in the studies that have been done so far on identifying the mechanisms underlying the functional instability of the ankle show the difference between nonlinear and linear dynamic view. In fact, from the point of view of linear dynamics, the results of studies indicate the fact that the ankle in the frontal plane has more displacement in people with functional instability. While from a nonlinear dynamic's perspective, studies have shown that people with functional ankle instability have less movement in the frontal lobe than healthy individuals.

Keyword: Ankle joint, functional instability, ligament, variability