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Role of Combined Agility and Balance Training on Reducing Injury Risk in Basketball Players: A Systematic Review

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ABSTRACT

Introduction: Basketball is a fast-paced game that requires extreme physical activity including quick movements, sharp direction changes and frequent jumps. These physical demands results in various injuries specially in ankle and knee joints. To reduce the risk of these injuries, combined agility and balance training is seen highly effective. Agility is the ability to move quickly and change direction easily, Agility is correlated with several trainable physical attributes, including technique, strength, endurance, power and cognitive components. Balance is defined as ability to maintain stability and control of the body, especially while performing movements or standing.Balance refers to maintaining the body's centre of gravity over the base of support by neuromuscular responses in response to continuous visual, vestibular, and somatosensory feedback.

Aim: The aim of this study is to discover the role of combined agility and balance training to prevent injuries and other musculoskeletal impairments among basketball players. Improving balance and agility contributes in improving stability, functions and athletic performance. Materials and Methods: Online databases like PubMed, Google Scholar and Cochrane were searched for articles published between 2010 to 2024. The search term such as "Agility: Balance training, Basketball player,reducing injury on basketball, using Boolean operators AND, OR. All the articles were randomised controlled trial, and were included in English language and other language were excluded.

Results: A total of 58 articles were revived from different sites, out of which only 10 articles were found to meet the inclusion criteria. The results showed a significant decrease in rates of injuries and marked enhancements in performance among the basketball players who underwent combined agility and balance training. It also showed overall improved balance and agility in subsequent tests.

Conclusion: This review concludes that combined agility and balance training plays a pivotal role in preventing injuries and enhancing performance in basketball players. By focusing on these skills' basketball players can improve their physical resilience, enhance their performance, and remain healthier throughout the sports season.

Keywords: Atheletic performance, Cognitive, Physical resilience