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Effect of Neuromuscular Training on Strength, Agility and Balance in Football Players

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ABSTRACT

Introduction: Football demands high level of physical conditioning including agility, strength, and balance apart from technical, tactical, and mental skills. It has been demonstrated that neuromuscular training techniques improve these elements, enhancing performance and lowering the risk of injury. This review consolidates evidence on the impact of these training methods on football players' agility, strength, and balance.

Aim: To evaluate how well neuromuscular and proprioceptive training affects football players' strength, agility, and balance.

Materials and Methods: The studies published in last 10 years, between 2015 to 2023 were examined for this narrative review. Search engines like PubMed and Google scholar were used to find relevant publications using keywords like "proprioception," "neuromuscular training," and "football players." Only English language publications that satisfied certain inclusion requirements were taken into account.

Ten studies meeting the inclusion criteria highlighted the benefits of these training methods. While neuromuscular training improved strength, agility, and injury prevention, proprioceptive training on unstable surfaces improved balance, joint stability, and technical skills. For instance, tests of agility revealed notable gains of 0.3 to 0.5 seconds and increases of 5 to 10% in lower limb strength. In certain strategies, the incidence of injuries decreased by as much as 67%. Integrative neuromuscular training demonstrated improvements in dynamic stability, coordination, and sport-specific performance.

In conclusion, football players can improve their physical performance and lower their risk of injury by using proprioceptive and neuromuscular training. To maximise performance and guarantee injury prevention, these techniques should be incorporated into athletic and rehabilitation regimens.

Keywords: Joint stability, Proprioceptive training, Tactical and mental skills

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