

Special Issue

Acute and Chronic Effects of Strength Training on Neuromuscular Responses, Adaptations, and Sport Performance

Message from the Guest Editor

Strength training plays a central role in enhancing sport performance through improvements in neuromuscular function, movement efficiency, and long-term physical development. Recent approaches such as velocity-based training, plyometric training, complex contrast training, local muscular endurance training, and local vibration training have expanded conventional resistance training paradigms, offering diverse ways to influence both acute neuromuscular responses and chronic adaptations. In parallel, growing attention to strength training in youth highlights the importance of individualized and age-appropriate development strategies. The aim of this Special Issue is to present current knowledge and recent advances examining how these training modalities impact neuromuscular adaptations, motor control, training load management, fatigue resistance, and performance outcomes across different sport populations. We welcome different types of manuscript submissions, including experimental studies, reviews, systematic reviews and meta-analyses, which provide evidence-based insights to support optimizing strength training interventions for improved sport performance.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Sports (ISSN 2075-4663) is an international, peer-reviewed open access advanced forum for publishing studies related to the interdisciplinary area of sport, exercise and health sciences. Studies focused solely on competitive performance outcomes (e.g., game statistics, records) without direct application to sports training programs will be considered out of scope.

Sports publishes reviews, regular research papers, and communications, as well as Special Issues on particular subjects.

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