



Musculoskeletal

Risk factors for calf muscle strain injuries in sports

...an overview of the literature

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Calf muscle strains represent one of the highest soft tissue injury incidences in sports that involve high running loads, speed and acceleration and deceleration. This 2017 systematic review identified increasing age and previous history of calf strain as the strongest risk factors for future calf muscle injury. This may be explained by neuromuscular maladaptations and loss in skeletal muscle tissue quality and function that occurs with increasing age. Previous injury may create maladaptive responses affecting factors relating to strength, neurology and tissue architecture as seen post hamstring and ACL injury.

The study found limited evidence that previous adductor, hamstring, quadriceps or knee injury may also influence likelihood of calf injuries. No association of future calf strains was found between variables relating to individual player characteristics such as player weight, height, gender and side dominance and environmental descriptors, although the authors noted again a lack of evidence on these variables.

The lack of studies and variables within this review highlight the need for future research in this area. Similar research to that undertaken recently in the field of hamstrings, studies may include variables such as different strength qualities and calf muscle fascicle length, pennation angle, cross-sectional area and tissue quality. These may also be worthwhile to gain a better understanding of risk of calf muscle strain injuries in sport.



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