

THEORETICAL APPLICATIONS OF BLOOD FLOW RESTRICTION TRAINING IN MANAGING CHRONIC ANKLE INSTABILITY IN THE BASKETBALL ATHLETE

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ABSTRACT

Chronic ankle instability (CAI) is a common dysfunctional state in the basketball population accompanied by pain, weakness and proprioceptive deficits which greatly affect performance. Research evidence has supported the use of blood flow restriction (BFR) training as an effective treatment strategy for improving muscle strength, hypertrophy and function following injury in a variety of patient populations. In managing CAI, it is important to address proximal and distal muscle weakness, pain, and altered proprioception to reduce the likelihood of re-occurring ankle injury. The ability to mitigate acute and cumulative strength and muscle volume losses through the integration of BFR after injury has been supported in research literature. In addition, applications of BFR training for modulating pain, improving muscle activation and proximal muscle strength have recently been suggested and may provide potential benefit for athletes with CAI. The purpose of this clinical commentary is to discuss background evidence supporting the implementation of blood flow restriction training and use a theoretical model for managing CAI as well as to suggest novel treatment strategies using this method.

Key Words: Ankle instability, blood flow restriction, strength training

Level of Evidence: 5

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Conflict of interest:

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