A032 HSCI

Comparing the effect of Blood Flow Restriction Training in people under the age of 40 versus over the age of 40 and in males versus females.

Abstract

Background:
Blood flow restriction (BFR) is a training method partially restricting arterial inflow and fully restricting venous outflow in working musculature during exercise. BFR has been shown to significantly increase skeletal muscle strength and/or create hypertrophy in both older and younger healthy populations. [28]

Purpose:
The purpose of this study is to analyze existing literature to compare the effects of BFR in male versus female as well as age groups above and below the age of 40. We expect to find that BFR is safe and beneficial for all populations.

Methods:
The systematic literature research was performed in the following electronic databases including PubMed, Google Scholar, EBSCO, and ResearchGate. Keywords used during the search included Blood flow restriction training, osteoarthritis, balance, proprioception, gait, pain, cardiopulmonary endurance, muscular endurance, tolerance, older adults, younger adults, exercise program, clinical outcomes, and rehabilitation.

Results:
41 articles met the criteria for this systematic review. BFR was found to be a safe and efficient adjunct to traditional resistance training in all age groups as well as for males and females. BFR was also found to be a safe and efficient alternative to traditional resistance exercise for all populations when they are restricted from performing high or low resistance training.

Discussion/Conclusion:
BFR has traditionally been tested on young athletes but more recently has expanded the populations to include non-athletic individuals of all ages, as well as males and females. There is much less evidence comparing males to females, so continued research should be conducted to further evaluate variations in male vs female responses to BFR.