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Blood Flow Restriction Training on Chronic Stoke Patient: A Review

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ABSTRACT

Introduction: Stroke is a leading cause of long term disabilities characterised by muscle weakness, motor dysfunction and reduced physical activity. Conventional treatment approach consists of improving motor functions using stretching, strengthening and functional training. Blood flow restriction training is a newer form of strength training for stroke rehabilitation. Blood flow restriction training combines low intensity exercises with partial vascular occlusion, using a cuff or band that restricts venous blood flow while maintaining arterial inflow. This method allow patients to gain muscle strength & hypertrophy, thus improving functional mobility.

Aim: To review the effect of blood flow restriction training on chronic stroke patient for improving muscle strength and functional mobility.

Materials and Methods: Articles in English, published between 2018 to 2024, inluding chronic stroke patients were included. The review was conducted using databases like PubMed, Google Scholar, and Research Gate. After searching the databases, 25 full-text articles that fullfillied the inclusion criteria and objectives were included in this review. Qualitative analysis of data was done. The major trends found were muscle hypertrophy, increased muscle strength and functional mobility.

Results: The search identified 40 studies, after the screening of titles, abstract and full text, 25 studies were included in the final analysis out of 25 studies,16 studies showed significant improvement of blood flow restriction training on chronic stroke patients. Nine studies suggested no significant improvement. However no side effects were noted in any study.

Conclusion: The key conclusion of the review is that blood flow restriction training is beneficial for chronic stroke patients and that should be included in clinical practice. However, blood flow restriction training is a new method and should be more explored in order to provide greater evidence to be recommended for patient usage.

Keywords: Long term disabilities, Low intensity exercise, Rehabilitation

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