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To Examine the Effect of Pneumatic Compression in Sports Rehabilitation: A Literature Review

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ABSTRACT

A pneumatic compression is a medical device that improves circulation by applying compressed air to the legs or other body parts. It is also termed as Intermittent Pneumatic Compression (IPC). Nowadays, this therapy add has popular in the sports rehabilitation because it is non-invasive evidence-based technology and the main role of this therapy in sports is to enhance the recovery, improve performance, prevent injuries and rehabilitation programmes. The main aim of this literature review is to examine the effect of pneumatic compression in sports rehabilitation, which generally focusses on the rehabilitation programme after injury. There were various researches performed on the PubMed, physiotherapy evidence-based database (PEDro), Cochrane and Google Scholar from year 2017 to 2024. A total of 2000 articles were obtained in different databases, with the key words of “pneumatic compressions,” and “atheletes.” After exclusion of non-English and duplicate articles, 10 articles are included by their preferable criteria comprising randomised controlled trials, systematic review add and cross sectional surveys. The findings of this literature review states that pneumatic compression has shown effects in reducing oedema, swelling, and pain, and it supports the management of acute lateral ankle sprains. Additionally, blood circulation improvement is also seen. This study concludes that pneumatic compression can be effective in athletic recovery and rehabilitation processes. While current evidence prop-up its effectiveness, to check its long-term benefits and to scout its role in combination with other therapeutic modalities further research is needed. Clinicians should continue to assess the most appropriate interventions for pain management and muscle recovery, with pneumatic compression serving as a promising option in rehabilitation protocols.

Keywords: Athletes, Edema, Intermittent Pneumatic Compression Devices, Pain.