

Abstract

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Title of the bachelor's thesis: Comparison of methods using balance boards and neurocentric approach in restoring stability after ankle distortion in aerobic gymnastics

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Objectives: To compare the results of available studies using balance boards and neurocentric approach in restoring stability and to explain their principles.

Methods: Search of Czech and foreign literature using the FTVS library, PubMed, Google Scholar and ScienceDirect. The practical part uses a method of comparison.

Results: The effectiveness of balance boards in restoring stability after ankle distortion has been demonstrated in several studies. On the other hand, its influence is questioned by two of the selected studies which did not show any positive results from using balance boards on stability. Some of the results have been evaluated by questionnaires or stability measurements on an unstable surface, so it is not possible to determine exactly whether the use of balance aids improves stability on a stable surface and is therefore appropriate when returning to sport. The research looking at the neurocentric approach has predominantly been conducted on probands with CNS disorder or injury, so it is not proven exactly what results would occur if the same exercises were performed by probands with distortion. However, through the use of standardized stability tests, it can be said that a neurocentric approach leads to improved stability.

Keywords: ankle distortion, stability, neurotraining, neurocentric approach, vestibular rehabilitation, balance boards, proprioception, aerobic gymnastics