

Effectiveness of Scapular Retraction Exercises on Forward Head Posture: A Narrative Review

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ABSTRACT

Forward head posture is the anterior positioning of the cervical vertebrae, which is characterised by the extension of the upper neck bone. This condition can lead to musculoskeletal discomfort, particularly in the neck and shoulders, and is often caused by muscle imbalances, poor ergonomics, and prolonged static postures. This posture leads to structural changes and degeneration of the neck muscles by reducing the dispersion of biomechanical loading. This condition has been exacerbated by the increasing use of devices like smart mobile phones and computers for long periods of time in a bad cervical posture. It is common in university students and working professionals. The aim of this narrative review is to explore the effect of scapular retraction exercises in forward head posture. The present study includes all the databases collected from Google Scholar and PubMed from the year 2019-2024 with the keywords "Forward head posture", "Scapular retraction exercise", "students", and "general population" with the result of 18190 articles. Only

three Randomised Controlled Trials (RCTs) remained after the duplicate article removal. A total of 180 participants participated in these three recruited RCTs with the outcome measures being forward head angle ($\geq 20^\circ$), cervical range of motion, neck disability index, shoulder pain and disability index with an average of 4-week shoulder retraction exercise intervention. All three studies suggest that scapular retraction exercises can positively impact both cervical spine alignment and shoulder posture by strengthening the rhomboids, middle trapezius, and lower trapezius muscles, which are critical in stabilising the scapulae and counteracting forward head displacement. Overall scapular retraction exercises are very effective and improve the forward head posture, reduce the forward head angle, strengthen the neck muscle and are effective in forward head posture pain.

Keywords: Anterior positioning, Biochemical loading, General population, Student