



***Musculoskeletal***

## **Validity of instruments assessing scapular function**

**Do clinical instruments to assess scapular posture, movement, and dysfunction measure what they claim to?**

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Current evidence is not sufficient to recommend any of the 31 measurement instruments related to scapular posture, movement, and dyskinesia.

The quality of evidence for the criterion validity of measurements of scapular protraction/ retraction and rotation up to 120 degrees is sufficient, however that of scapular posture, range of motion, and lateral slide is insufficient.

Other measurements showed even lower evidence quality. Measurements of scapular dyskinesia were especially prone to misinterpretation.

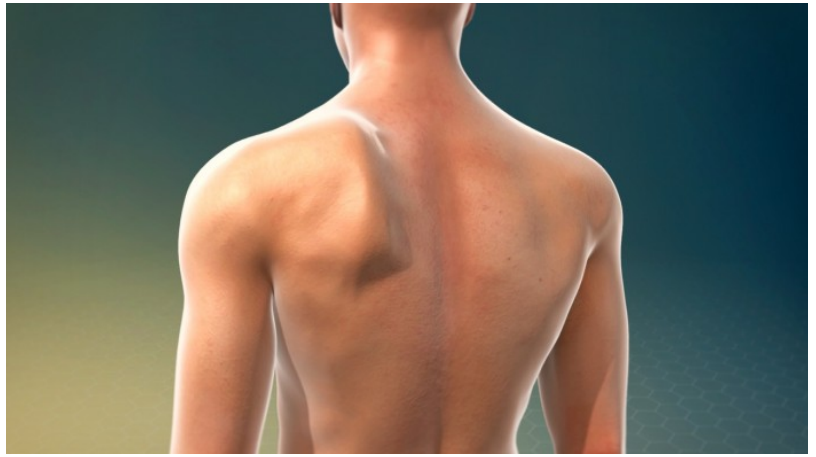
Changes in scapular posture and movement patterns have traditionally been associated with the development and persistence of shoulder complaints and therefore are usually part of the clinical shoulder evaluation.

However, the relevance of these changes and the comparative effectiveness of programmes including scapula-specific rehabilitation has been questioned.

A systematic review was conducted which included 14 studies which evaluated at least one scapular measure. Study quality was assessed using the COSMIN checklist and evidence quality was determined for each measurement.

The relationship between scapular movement dysfunction and shoulder complaints is not adequately established by current measurement methods, which leads to the lack of recommendation of any of the analysed measurements.

Further research is still needed to establish a framework for the interpretation of changes in scapular movement and posture and their relevance for shoulder complaints. Given the lack of validity studies, not all scapula-related measures could be evaluated by this review.



## Expert opinion

This systematic review addresses another ill-defined concept such as that of “scapular dyskinesis” and points to its low clinical value as it is currently implemented.

This can probably be expected given the multifactorial nature of the various shoulder-related conditions (especially if longstanding) and the varying influence of the scapula on these complaints means that it will be hard for such measurements to have global validity in heterogeneous samples.

The findings warrant us to exert caution when considering the clinical value of these measurements and to consider the individual features of each patient and the potential contribution of different factors.

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