Caution urged on concept of lumbar instability

I offer a caution regarding the Clinimetrics appraisal ‘Passive intervertebral motion tests for diagnosis of lumbar segmental instability’ (Haxby Abbot 2007).

The appraisal refers to studies of manual assessment used for ‘detecting excessive sagittal translation displacement’. It notes that the outcomes are limited to quantity of displacement and represent ‘only a proportion of the construct of segmental instability’. The concept of instability is further reinforced by the title which refers to manual assessments being used for ‘diagnosis of lumbar segmental instability’.

It is possible some readers may form the impression that excess translation is a component of lumbar instability. This myth has been dispelled. Even in the presence of bilateral pars defects, considered archetypical of instability, studies using biplanar radiography (Pearcy and Shepherd 1985), stereophotogrammetry (Axelsonsson et al 2000) or functional magnetic resonance imaging (McGregor et al 2002) found no evidence of excess translation. Schneider (2005) detected abnormal motion in spondylolytic spondylolisthesis but excess translation occurred in only one lytic segment.

The biomechanical basis of instability in spondylolytic spondylolisthesis (Schneider et al 2005), and in the mid-cervical spine (Subramanian et al 2007), is not excess translation but rather segments operating around an abnormal point of axial compression.

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References

Statement regarding registration of clinical trials from the Editorial Board of Australian Journal of Physiotherapy

This journal is moving towards requiring that clinical trials whose results are submitted for publication in Australian Journal of Physiotherapy are registered. From January 2008, all clinical trials submitted to the journal must have been registered prospectively in a publicly-accessible trials register. We will accept any register that satisfies the International Committee of Medical Journal Editors requirements. Authors must provide the name and address of the register and the trial registration number on submission.