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Functional movement and breathing dysfunction

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Functional movement and breathing dysfunction

Over the past 25 years, there has been a trend away from traditional, isolated assessment and strengthening approaches, toward a more integrated, functional model. (Cook et al 2006) As a result the use of the Functional Assessment Screen (FMS™) has become widespread in manual therapy practice, commonly as a means of assessing the movement patterns of athletes in general (Parchmann & McBride 2011) as well as sport-specific assessment, for example (American) football (Kiesel et al 2007).

Outside of sporting settings FMS™ has been used in populations ranging from military personnel (Lisman et al 2013) to middle-aged adults (Perry & Koehle 2013) and, with adjusted protocols, to the elderly – i.e. the ‘Timed Movement battery’. (Creel et al 2001).

The Functional Movement Screen™ utilizes seven functional movements: Deep Squat, Hurdle Step, In-line Lunge, Shoulder Mobility, Active Straight Leg Raise (SLR), Trunk Stability Push Up, Rotary Stability.

It is claimed by many that the use of this form of functional assessment accurately assists in identifying those most at risk for injury, as well as offering confidence in making decisions related to interventions for functional performance enhancement. (Minick et al 2010)

Others however maintain that the test offers no more than “a momentary impression of general movement quality” (Frost et al 2012)

Studies have shown that even for novice testers there was “*moderate to good interrater and intrarater reliability, with acceptable levels of measurement error.*” – in other words the tests appears to be reliable. (Creel et al 2001)

A recent study has evaluated the influence of Breathing Pattern Disorders (BPD) – such as hyperventilation – on the efficiency with which these movement patterns can be produced. Bradley & Esformes (2014) have found that “*Individuals who exhibited biochemical and biomechanical signs of BPD were significantly more likely to score poorly on the FMS™*” and that “*inefficient breathing [can] result in muscular imbalance, motor control alterations, and physiological adaptations that are capable of modifying movement*”

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