Tutorial 6: Back Health Assessment

The purpose of this laboratory is to determine low-back fitness according to the Canadian Physical Activity, Fitness and Lifestyle Approach (CPAFLA) protocol. Back problems are among the most common chronic conditions in Canada (Schultz, *et al*, 2003). Back pain can occur at any point in the spine and is characterized by a range of symptoms including pain, muscle tension or stiffness or weakness in the legs or feet (Statistics Canada, 2006). Contributing factors include poor muscle tone, especially in the back and abdominal muscles; a sedentary lifestyle; obesity; smoking; poor posture; and in particular, improper heavy lifting (Kopec, *et al,* 2004 & Dunn, *et al,* 2004). Low back health compromises of flexibility, proper posture, abdominal and back muscle strength and endurance. During this laboratory flexibility will be assessed using the *Sit and Reach* test; endurance of the back extensor muscles are measured using the Biering-Sorensen method where the participant is required to support their upper body while their legs are fixed to a table; endurance of the abdominals are measured through a partial curl up test; and measurement of waist circumference, in which a greater circumference is indicative of increased risk for back pain. The final component of the back fitness score entails a Healthy Physical Activity Participation Questionnaire (HPAPQ), in which higher levels of physical activity are associated with lower incidence of back pain, however, the reported correlation between physical activity and low back pain is inconsistent in the literature (Albert, *et al*, 2001).

**Results: Back Health**

Client: Stephanie Kendall

Age: 20

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| Waist Circumference: 94cmBack Extensor Endurance Score ► 180 sec ► Excellent |
| Lying face down with legs strapped to a supporting platform, maintaining a horizontal position for as long a possible to a maximum of 180 seconds. ▲ Higher is betterSit and Reach ► 25cm ► Needs WorkSat on the floor, with legs fully extended, and reached as far forward as possible. Sit and Reach test measures your hamstring flexibility. ▲ Higher is better |
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Composites Back Health Score: 18 ► Good

\*Will be working with client to increase flexibility.

**References**

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