

Repeatability of aerobic capacity measurements in Parkinson Disease

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Setting the scene

Maximal or peak aerobic capacity (VO₂peak) during a maximal effort graded exercise test (GXT) is considered by many to be the “gold standard” outcome for assessing the impact of exercise training on cardiorespiratory fitness. The reliability of this measure in Parkinson Disease (PD) has not been established, where the degree of motor impairment can vary greatly and is influenced by medications. This study examined the reliability of VO₂peak during maximal effort GXT in subjects with PD.

What did they do?

Seventy healthy middle-aged and older subjects with PD, Hoehn and Yahr stage 1.5 to 3 underwent a screening/acclimatization maximal effort treadmill test followed by 2 additional maximal effort treadmill tests with repeated measurements of VO₂peak. A third VO₂peak test was performed in a subset of 21 subjects.

Takeaway home message

These results demonstrate that GXT with measurement of aerobic exercise capacity is reproducible and can be safely performed in subjects with mild to moderate PD. The measurement of VO₂peak is reliable and repeatable in subjects with mild to moderate PD, thereby validating use of this parameter for assessing the effects of exercise interventions on cardiorespiratory fitness.