

## **Test-retest reliability of the six-minute walk test in subjects with myotonic dystrophy**

*By Kierkegaard, Marie (Anna Tollbäck)*

Valid and reliable outcome measures are needed in order to evaluate treatment effects. The aim of the actual study was to assess test-retest reliability of the six-minute walk test (6MWT) in subjects with myotonic dystrophy type 1 (MD1).

Methodology: Twelve subjects (6 men, 6 women, mean age 43.6 years, range 28-68) with MD1 performed three 6MWTs on 2 occasions, one week apart, i.e. six tests in total per subject. Subjects were told to walk as far as possible for six minutes. Distance walked (m), heart rate and perceived rate of exertion, leg effort and dyspnea were assessed.

Findings: No significant systematic differences or interaction effect were found between tests and occasions. Mean walking distance increased by 16.7 m over the six tests, indicating a modest learning effect. Reliability, expressed as intraclass correlation coefficient (ICC2.1) was high and standard error of measurement (SEM) and measure of repeatability were small. For all six walking tests ICC2.1 was 0.99, SEM 19.9 m, and repeatability was 34.3m and for the five last walking tests ICC2.1 was 0.99, SEM 14.6 m, and repeatability was 28.9 m.

Conclusion: The 6MWT is a reliable and useful clinical test. One practice trial is recommended. 29 m indicates a real clinical change for an individual subject.

Keywords: myotonic dystrophy, reproducibility of results, outcome assessment, walking, rehabilitaion.