Intrarater and interrater reliability of the MS functional composite outcome measure.

OBJECTIVE: To assess practice effects, and intrarater and interrater reliability of the MS functional composite (MSFC) outcome measure.

BACKGROUND: To address the poor reliability and insensitivity to change of available MS clinical rating scales, the National MS Society's Clinical Outcomes Assessment Task Force developed the MSFC, a multidimensional quantitative clinical outcome measure that includes tests of leg function/ambulation (Timed 25-Foot Walk), arm function (Nine-Hole Peg Test), and cognitive function (Paced Auditory Serial Addition Test).

METHODS: Ten patients with secondary progressive MS underwent six testing sessions over a 2-week period. The MSFC was administered by the same examining technician in the first five sessions and by the other technician in the sixth. Patients were reassessed by both technicians after 6 months (sessions 7 and 8). The MSFC score was calculated as the mean of the Z scores of the three components. A pooled dataset derived from secondary progressive MS patients in the placebo arms of previous clinical trials and natural history studies served as the reference population to standardize scores.

RESULTS: Practice effects were evident initially but stabilized by the fourth administration. The intraclass correlation coefficient (ICC) was 0.97 for the MSFC for session 4 versus session 5 (intrarater reliability). The ICC was 0.95 for session 5 versus session 6 (interrater reliability).
and was 0.96 for session 7 versus session 8 when patients were reassessed 6 months later.

**CONCLUSIONS:** The MS functional composite (MSFC) outcome measure had excellent intrarater and interrater reliability when standardized procedures were used to train examining technicians and to assess patients. Prebaseline testing sessions should be included in clinical trials employing the MSFC to compensate for practice effects.