NeuroCom® Balance Manager®
Motor Control Test

Motor Control Test (MCT)

The MCT test protocol for NeuroCom Balance Manager systems quantifies the patient's ability to quickly recover following an unexpected external disturbance. Sequences of small, medium or large platform translations (scaled to the patient's height) in forward and backward directions elicit automatic postural responses.

An Introduction to the Motor Control Test

Confidence The MCT completes the diagnostic picture — complementing interpretation of the Sensory Organization Test (SOT) results, particularly in complex patient populations.

Efficient The MCT can provide prognostic information and direction for patient management and rehabilitation.

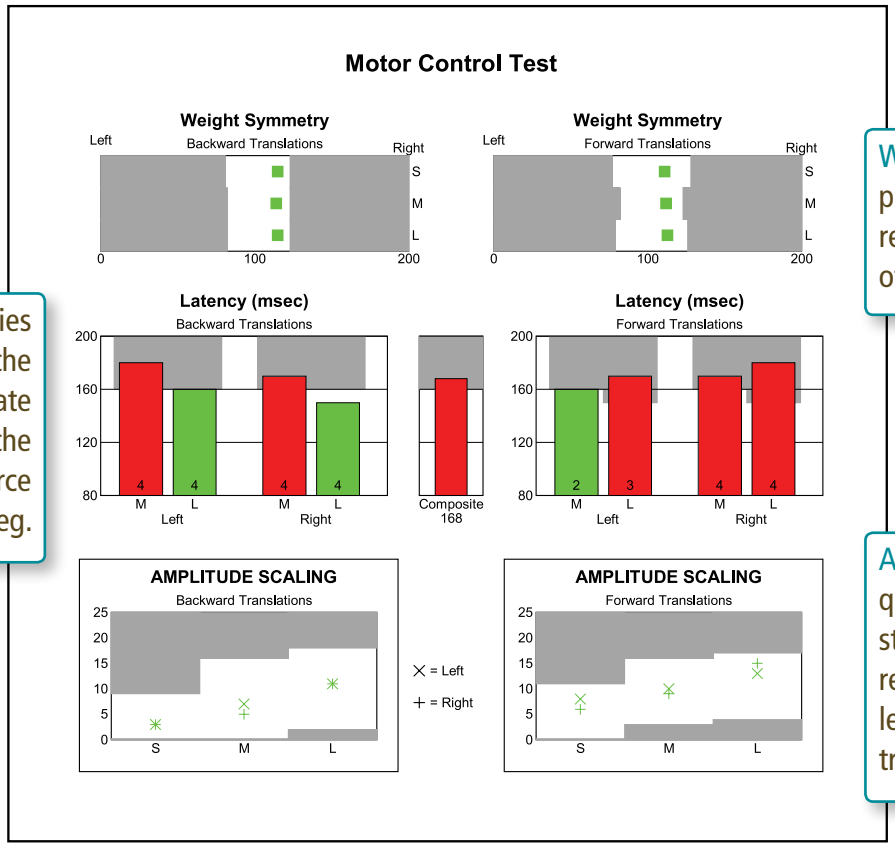
Effective The MCT serves as a fall risk indicator and identifies the highest risk patients. It is essential for the identification and documentation of aphysiologic performance.

Established The MCT has a 20-year record of clinical use supported by peer-reviewed research.

Computerized Dynamic Posturography (CDP), comprised of the SOT, MCT and ADT, is available only on the NeuroCom EquiTest®, SMART Equitest®, EquiTest Clinical Research System and SMART EquiTest® Clinical Research System.

The MCT test protocol is clinically important in several populations:

- Neurologic/Movement Disorders (Acquired Brain Injury, MS, Stroke, etc.)
- Polytrauma
- Geriatric – Multifactorial
- Medical Legal



LATENCY quantifies the time between the stimulus (force plate translation) and the patient's active force responses in each leg.

WEIGHT SYMMETRY provides information relative to distribution of weight on each leg.

AMPLITUDE SCALING quantifies the strength (efficacy) of responses for both legs and for the three translation sizes.

CLINICAL SIGNIFICANCE

PATIENT: A 79 year-old male is diagnosed with gait instability after a recent fall. He has a 5 year history of peripheral neuropathy with EMG/NCV findings unchanged from his last exam.

DILEMMA: 1) How is his peripheral neuropathy affecting his postural control?

2) What can be done to improve his balance and functional safety?

IMPAIRMENTS: The Motor Control Test was completed as part of his postural control assessment with Computerized Dynamic Posturography (CDP).

- The time between surface translation onset (stimulus) and initiation of the patient's active response was abnormal in both directions and for both lower extremities.
- Composite latency of 168 msec is abnormal.

ASSESSMENT:

- Progression of peripheral neuropathy affecting postural control–risk for slip, trip, and/or fall has increased.
- Review sensory balance findings and plan rehab accordingly.

PROGNOSIS: The delay in automatic motor responses is a prognostic sign for rehabilitation and suggests limited functional outcome. A goal is set to maximize functional safety and teach compensatory strategy.

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