



EMG/Postural Evoked Response (PER)



System Requirements:

The EMG option is available on the following NeuroCom systems:

- EquiTest®
- SMART EquiTest®
- SMART Balance Master®
- PRO Balance Master®

The EMG option requires software Version 8.0 or higher.

Components:

- Data acquisition and analysis software
- Compact amplifier providing isolated power and band-pass filtering
- Active recording electrodes
- Lightweight belt-mounted interface box
- Flexible patient cable

Specifications:

- Optically isolated 8 channel buffer amplifier
- Four-channel belt box standard/ 8 optional
- Bandpass: 10-500 Hz, 3dB down
- Gain: 5,000
- A/D resolution: 12 bit, 1KHz

Stimuli: Toes-up/toes-down platform rotations at 25°/sec. or 50°/sec. through 2°, 4°, or 8° arc are standard. Additional backward/forward platform translations are standard on the EquiTest® and SMART EquiTest® systems.

Electrodes: Active surface electrodes with built-in amplification eliminate cable artifacts and enhance signal quality.

Display: Real time display for monitoring electrode placement and data collection.

Data Review: Individual trials can be accepted or rejected prior to calculation of the rectified average.

Data Analysis: Interactive cursor routine for labeling waveforms. Absolute latencies, response amplitudes, and area under the curve are calculated accordingly.

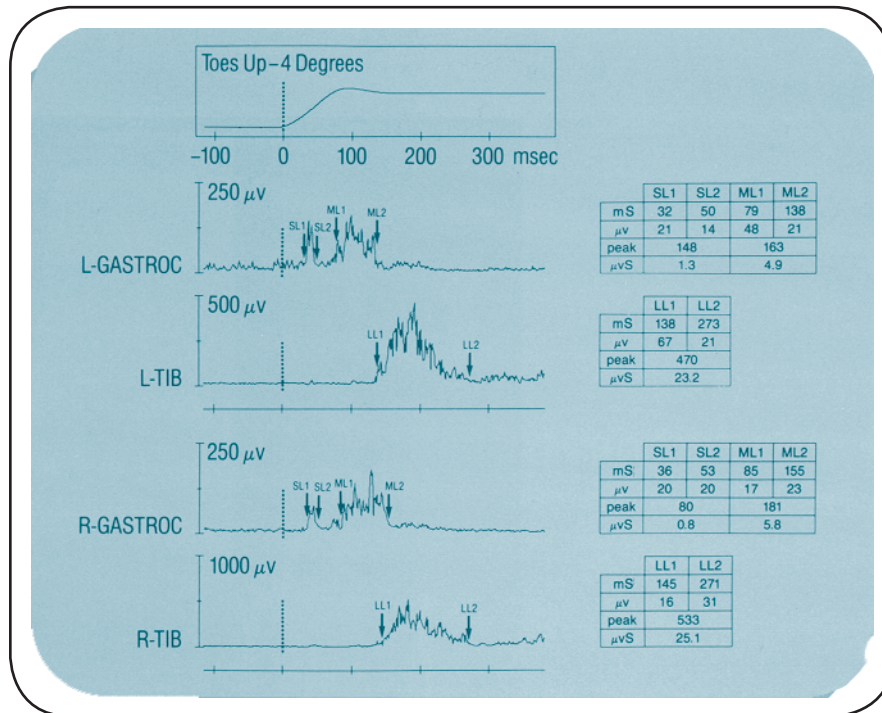
Hard Copy Printout: Results are immediately available for inclusion in medical charts.

Specifications subject to change without notice.



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EMG/Postural Evoked Response (PER) The EMG/PER test quantifies impairments in timing within the automatic motor system of balance. The EMG/PER test utilizes active surface electrodes to record the short, medium, and long latency stretch reflex responses of the gastrocnemius and tibialis muscles to unexpected and rapid toes up or toes down disturbances of the support surface.



Typical EMG recording documenting short (SL1, SL2), medium (ML1, ML2) and long (LL1, LL2) latency components of the Postural Evoked Response (PER).

Abbreviations:

- L-Gastroc Left Gastrocnemius
- L-Tib Left Tibialis
- R-Gastroc Right Gastrocnemius
- R-Tib Right Tibialis