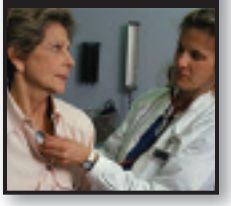
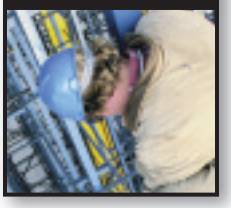
NEUROMETER® CPT/C®

Automated Neuroselective Sensory Nerve Conduction Thresholds (sNCT)

Clinical



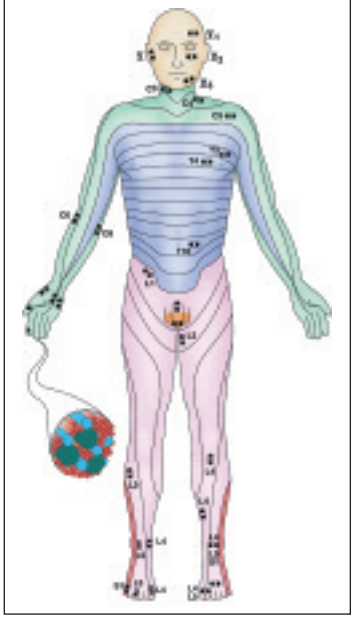
Industry



Research

Neurometer® CPT/C electrodiagnostic devices perform automated neuroselective sensory Nerve Conduction Threshold (sNCT) evaluations by determining Current Perception Threshold (CPT) measures. Neuroselective sinusoidal electrical stimuli quickly, painlessly and objectively quantify the conduction and functional integrity of the large and small myelinated and unmyelinated sensory nerve fibers. Easy operation, portability and versatile computer controlled testing modes provide standardized double blind automated sensory evaluations for clinical, occupational and research settings.

Test Sites



The Neurometer®CPT/C can evaluate and document sensory nerve impairments at any cutaneous or mucosal site. The sNCT/CPT evaluation is extremely sensitive, detecting and quantifying hyperesthesia in early stage progressive neuropathy and hypoesthesia in more advanced conditions. The CPT/C conducts a full range of self-administered, automated, manual and programmable neuroselective sensory nerve evaluations in addition to the sNCT/CPT procedure. The fast and accurate RCPT mode allows individuals and groups to be quickly assessed for changes and abnormalities in sensory nerve function. The atraumatic Pain Tolerance Threshold (PTT) mode provides a reproducible, non-invasive method for neuroselective evaluations of conditions like allodynia and analgesia. The external computer control package adds programmable control functions to the CPT/C for creating automated atraumatic sensory evaluation procedures for both humans and laboratory animals. Special cabling also allows concurrent use of the CPT/C with fMRI and other imaging procedures and with bladder mucosal evaluations.

The Neurometer®CPT/C stimulus is self-calibrating and patented circuitry maintains a constant current output that compensates for normal variations in skin thickness and impedance. Compliance Guard®software monitors the consistency of patient responses assuring high reproducibility and significant reliability ($p>0.006$). Neuval®software, included with each device, performs a multidimensional analysis of CPT measures through comparison to clinically established healthy measures and generates a narrative laboratory report. Hundreds of peer reviewed publications and presentations establish the reliability of the sNCT/CPT examination. The Neurometer®CPT/C is uniquely sensitive and effective for evaluating sensory nerve impairments, and can provide significant benefits for you and your patients.

NEUROMETER® CPT/C® Applications

Differential Diagnosis: axonal versus demyelinating polyneuropathy, radiculopathy, myelopathy, compressive neuropathy, focal nerve lesions/peripheral nerve injuries, differentiate between large and small fiber neuropathies

Clinical Monitoring: document sensory impairments at any cutaneous or mucosal site, determine clinical severity of impairment or evaluate disability, high compliance for serial evaluations, assess neurotoxicity or neuro-protective sensation

Outcome Measurements: pharmaceuticals efficacy/neurotoxicity, nerve blocks, response to therapeutic interventions, nerve regeneration and recovery of function post surgery/injury

Occupational Testing: neck & low back injury, carpal tunnel syndrome, vibration neuropathy, neurotoxic exposure, epidemiological studies

Laboratory Research: non-invasive neuroselective animal response testing, atraumatic stimulus permits repeated testing of the animals at the same cutaneous site

Used in the Following Specialties:

Anesthesiology
Dentistry
Dermatology/Cosmetics
Endocrinology
Family Practice
Nephrology
Neurology
Neuro, Orthopedic & Plastic Surgery
Occupational Medicine
Oncology
Pain Medicine
Pharmacology and Toxicology
Physical Medicine & Rehab
Rheumatology
Urology

Comparison of Sensory Neurological Assessment Techniques	sNCT/CPT	sNCV	Vibratory / Thermal	SSEP
Selectively Evaluates Large & Small Fibers	✓			
Measures Hyperesthesia & Hypoesthesia	✓			
Differentiates between Polyneuropathy, Radiculopathy, Compressive Neuropathy	✓			
Detects Carpal Tunnel Syndrome (Compressive Neuropathies)	✓	✓		
Objective Automated Double Blind Forced Choice Testing	✓			
Not Effected by Skin Thickness, Impedance, Temperature, Bone Conduction	✓			
Painless, Non-invasive	✓		✓	✓
Nerve Fiber Function Test Not a Receptor Test	✓	✓		✓

Neurometer® CPT/C: TECHNICAL SPECIFICATIONS

CPT/C
Control: Microprocessor
Size: 15.5"(L), 11.75"(W), 5"(H)
Weight: 14.25 lbs (6.45 kg)
LCD Display: 9" (L), 15/16"(H)
Power: Rechargeable Internal Battery
Battery Charging Time: 8-18 hrs.
Battery Life: 10-12 hrs. Fully Charged
Output: 5Hz, 250Hz, 2000Hz Sinusoid
Output Accuracy: Digital/Quartz
Output Current: 0-10 mA Constant AC
Resolution Measurement: 0.001 mA

Remote Switch Box
Size: 4.5" (L), 3.5" (W), 2.5" (H)
Weight: 0.75 lbs (0.4 kg)
Audio & Visual Automated Test Cues

PRØI Printer
Size: 7.5"(L), 4.5" (W), 4.0" (H)
Weight: 1.3 lbs (0.4 kg)

Neuval® Software Features
- Normative values established for more than 30 multiple testing sites
- Easy to read patient reports
- Analyze CPT data for up to 3 bilateral sites per report
- Multi-dimensional analysis for unilateral and bilateral evaluations
- Automatic database repair feature
- Reports can be saved to disk for use in other software
- Minimum requirements: 512K RAM, hard disk drive, MS DOS 2.1 or greater and a printer

For Additional Information on the Neurometer® CPT/C, Contact:

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