NC-stat® | DPNCheck™

Fast, accurate, and quantitative evaluation of peripheral neuropathy

Product Features

NC-stat® | DPNCheck™ is a fast, accurate and quantitative test based on sural nerve conduction that may be used to evaluate neuropathies such as diabetic peripheral neuropathy (DPN).

Fast
Rapid results in less than one minute for efficient patient care

Straightforward
Easy to learn and operate

Accurate
Based on established and validated NC-stat® Technology[1-5]

Quantitative
Reports sural nerve conduction velocity and response amplitude

Efficient
Compact, portable design allows testing in every exam room

Clinical Benefits of Sural Nerve Conduction

Impact patient management by detecting, confirming, and monitoring DPN.

Detect
Early detection of DPN, even in the absence of symptoms and signs

Confirm
Help confirm or rule-out DPN and quantify severity

Monitor
Monitor changes in DPN over time and in response to treatment

Device Description

- Ergonomic hand-held device, battery powered
- Single patient-use biosensors
- Optional real-time response waveform review and editing
- Optional data upload to PC or secure internet portal for reports
- Factory calibrated, never requires on-site recalibration
- FDA 510(k) K041320; CE Marked

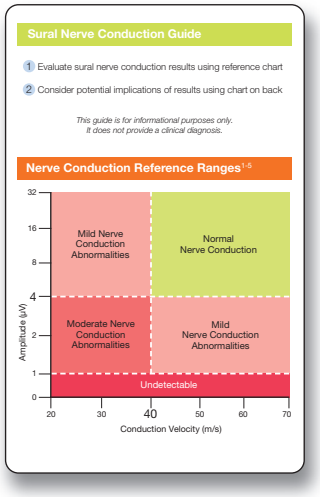
Results in Four Easy Steps

Position patient, prepare testing area

Turn on, place biosensor, apply gel

Place device, start 10-15 second test

Read results

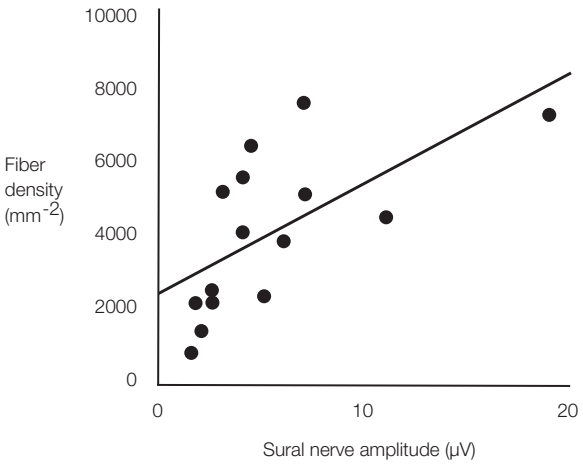


Straightforward sural nerve conduction guide helps you evaluate the test results.

Sural Nerve Conduction and DPN Assessment

- Sural nerve conduction is a standard, quantitative biomarker of DPN[6]
- Detects DPN with high diagnostic sensitivity[7,8]
- Reveals abnormalities indicative of subclinical DPN[9]
- Correlated to morphological severity (myelinated fiber loss[10]) of DPN[11,12]
- Detectable sural response suggestive of low foot ulcer risk[13]
- Predictive of concurrent microvascular complications[14]

Contact NeuroMetrix today for more information about how NC-stat® | DPNCheck™ may enhance your management of diabetes and its complications.



Relation between myelinated fiber density in sural nerve biopsies and sural nerve response amplitude (r=0.74, p<0.001).

Recreated from Veves et al. 1991.[11]

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NeuroMetrix is a medical device company focused on the diagnosis and treatment of the neurological complications of diabetes. The Company currently markets products for the detection, diagnosis, and monitoring of diabetic neuropathies such as diabetic peripheral neuropathy and median neuropathy. For more information, please visit **www.neurometrix.com**

NC-stat® | DPNCheck™

Hardware Specifications

Channels	2
CMRR (typical)	≥100 dB
Gain	x977
Noise (typical)	<2 µV rms
Frequency Response	(-3 dB) 2 Hz - 2 kHz
Sampling Frequency	10 kHz
ADC Resolution	16 bits (effective)
Stimulator Type	Constant Current Monophasic
Stimulator Max Voltage (typical)	420 V
Stimulator Max Current	100 mA hardware, software limited to 70 mA
Stimulator Pulse Width	100 µs
Stimulation Frequency	1 Hz (maximum)
Skin Temperature Measurement	Non contact, infrared
Battery	3.0 V Lithium Primary (CR123A)
LCD Display	2 digit, 7 segment
Water Resistance	IEC 529 IPX0 not protected from ingress of liquids
Classification Type	BF Applied Part, IEC 60601-1

Neurophysiological Specifications

Nerve	Sural sensory, orthodromic
Methodology	Preconfigured electrode array
Stimulation Site	Behind lateral malleoulus
Stimulation Configuration	Bipolar (2 cm separation)
Recording Site	9.22 cm proximal to stimulation
Recording Configuration	Bipolar (2 cm separation)
Conduction Velocity (CV)	Onset of negative deflection (m/s)
Response Amplitude	Peak to peak (µV)
Temperature Compensation Method	Q_{10} = 1.5, maximum correction 20%
Temperature Compensation Range	23°C - 30°C, standard temperature 30°C

References

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