DPNCheck®

Peripheral neuropathy is common among individuals with diabetes and pre-diabetes and leads to reduced quality of life, poor overall health, and increased mortality

- **50%** of people living with diabetes will develop peripheral neuropathy (DPN)[1]
- **50%** of diabetic peripheral neuropathies may be asymptomatic [1]
- DPN is associated with a **72%** increased risk of all-cause mortality among people living with diabetes [2]
- Patients with diabetes and DPN have more than **double** the risk of falls [3]
- Diabetes sufferers with peripheral neuropathy are at **7x** greater risk for developing diabetic foot ulcers[1]
- **20%** of people with a diabetic foot ulcer will undergo a lower extremity amputation[4]

Given these serious implications, standards of care dictate that early detection and management of peripheral neuropathy is essential to help reduce debilitating complications.

American Diabetes Association Standards of Care, 2025:
Individuals with a type 1 diabetes duration ≥5 years and all individuals with type 2 diabetes should be assessed annually for DPN using the medical history and simple clinical tests.[5]

Diabetes Canada Clinical Practice Guidelines, 2025:
In people with type 2 diabetes, screening for peripheral neuropathy should begin at diagnosis of diabetes and occur annually thereafter. In people with type 1 diabetes, annual screening should commence after 5 years' post-pubertal duration of diabetes.[6]

Inadequacy of monofilament and other traditional testing methods

- Traditional testing methods exhibit low sensitivity, especially among asymptomatic patients and those with mild disease
- Test results are highly subjective and rely on patient perception and truthful feedback
- Substantial variation in how tests are administrated by clinical staff leads to further inaccuracy
- As a result, **up to 50% of all asymptomatic cases are missed by traditional screening methods**[7]
  By the time most patients are diagnosed with peripheral neuropathy, they have been at elevated risk of complications for years

Recent publications provide evidence that traditional test methods miss early signs of critical complications

Numerous studies published in just the past 12 months have uncovered a direct association between peripheral neuropathy when it's identified by point-of-care nerve conduction studies (NCS) and dangerous microvascular complications or serious risks such as:

- Vision-Threatening Diabetic Retinopathy [8]
- Diabetic Nephropathy [9]
- All-cause Mortality [10]

In these studies, **only Point-of-Care (POC) NCS assessments** were able to demonstrate the predictive power of early testing. **Monofilament and other traditional test methods tests did not demonstrate the same advantages.**

Recent findings published in the British Medical Journal by Dunker et al. showed that traditional methods of peripheral neuropathy assessment such as the monofilament test demonstrate poor diagnostic performance. [11]

- Monofilament commonly used in polyneuropathy assessments lacks accuracy, irrespective of the severity of neuropathy determined by nerve conduction studies (NCS).
- **"Due to low sensitivity, almost half of patients with DPN are overlooked, diminishing the clinical value of a negative result."**
- The authors unequivocally advise against the use of monofilament in the evaluation of patients with diabetes.

Dunker et al.
BMJ Open Diabetes Res Care. 2023 *"The monofilament test should not be used to diagnose DPN, nor be used as an inclusion tool in diabetes research."*

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According to the American Academy of Neurology (AAN), nerve conduction studies (NCS) are the gold standard for diagnosing peripheral neuropathy[12]

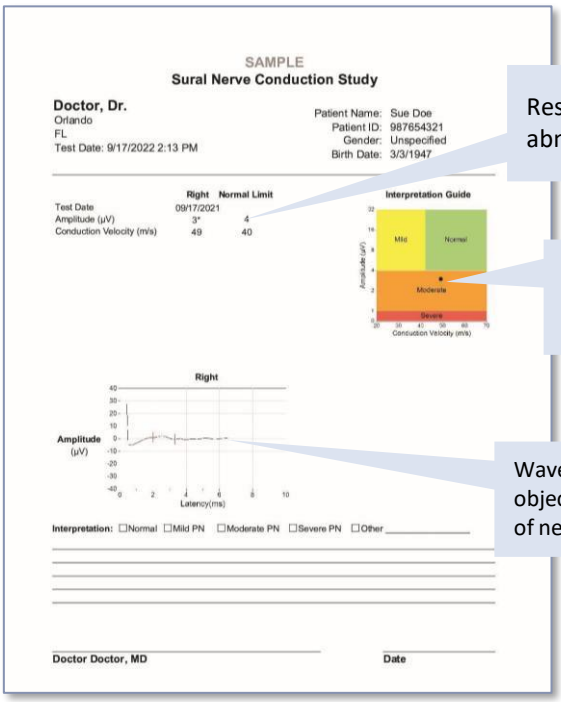
DPNCheck is an objective and accurate nerve conduction test (NCS) designed to be performed at the point of care.

- Non-invasive test performed in minutes by clinical staff
- Based on gold standard NCS technology
- Reports standard nerve conduction parameters
- High diagnostic sensitivity (90%) and specificity (>90%)
- Stages severity of peripheral neuropathy
- Numerous published peer-reviewed studies
- More than 2M patients tested

Test in Four Easy Steps:

DPNCheck generates an objective report with guides to aid interpretation and diagnosis

- The DPNCheck test displays objective values for amplitude and conduction velocity
- These values are included in a visual report that flags results outside normal limits
- Interpretation and diagnosis can be made by provider



Results, normal limits, abnormalities flagged

Visual neuropathy interpretation guide

Waveforms provide objective documentation of nerve function

Sources:

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