

Origination Date: 5/07	Revision Date(s): 5/08, 11/09, 2/11
Developed By: Medical Criteria Committee	



Approved: Neal Mills MD, MBA **Date:** 3/15/2011

Description:

Nerve conduction studies (NCS) can be used to evaluate patients with suspected disorders of the peripheral nervous system. NCS are often performed in conjunction with needle electromyogram (EMG). These electrodiagnostic studies measure the conduction velocity, latency, amplitude, as well as the shape of the response following electrical stimulation of a peripheral nerve through the skin and underlying tissue. This testing is important in diagnosing myopathies, radiculopathies, plexopathies, neuropathies, neuromuscular junction disorders, and nerve compression syndromes. When performed by a properly trained provider, NCS and EMG are considered the gold standard of electrodiagnostic testing.

Portable NCS devices have been developed to provide point-of-care nerve conduction studies. These devices are handheld and provide automated, non-invasive nerve conduction that can be conducted in various settings without the need for specialized training or equipment. An example of a portable NCS device is NeuroMetrix's NC-stat system.

Criteria:

Nerve conduction studies will be covered to plan limitations for **any** of the following conditions:

1. Carpal tunnel syndrome
2. Diabetic neuropathy
3. Disorders of the peripheral nervous system
4. Disturbance of skin sensation
5. Fasciculation Joint pain
6. Muscle weakness
7. Myopathy
8. Myositis
9. Nerve root compression
10. Neuritis
11. Neuropathy
12. Neuromuscular conditions
13. Pain in limb
14. Plexopathy
15. Radiculopathy
16. Spinal cord injury
17. Trauma to nerves

Nerve conduction studies performed for a diagnosis that is not listed above may be reviewed for medical necessity.

Not Covered:

ODS considers automated, handheld, non-invasive nerve conduction tests (i.e. NC-stat, the Brevio NCS monitor, or other similar devices) investigational. There is insufficient evidence and peer reviewed medical literature to establish the efficacy of these devices.

Information to be Submitted with Pre-Authorization Request:

- Records from the ordering physician documenting patient's symptoms and/or condition.

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Applicable CPT/HCPC:

Note: list may not be all inclusive

95900	Nerve conduction, amplitude and latency/velocity study, each nerve; motor, without F-wave study
95903	Nerve conduction, amplitude and latency/velocity study, each nerve; motor, with F-wave study
95904	Nerve conduction, amplitude and latency/velocity study, each nerve; sensory
95934	H-reflex, amplitude and latency study; record gastrocnemius/soleus muscle
95936	H-reflex, amplitude and latency study; record muscle other than gastrocnemius/soleus muscle

Not Covered:

S3905	Non-invasive electrodiagnostic testing with automatic computerized hand-held device to stimulate and measure neuromuscular signals in diagnosing and evaluating systemic and entrapment neuropathies
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References:

- American Association of Neuromuscular & Electrodiagnostic Medicine. Position Statement: Who is qualified to practice electrodiagnostic medicine? May 1999. Accessed on February 17, 2011 at: http://www.aanem.org/practice_issues/position_statements/Who's_Qualified.cfm.
- Gooch CL, Weimer LH. The electrodiagnosis of neuropathy: basic principles and common pitfalls. *Neurol Clin.* 2007 Feb;25(1):1-28.
- Haroim DG, de Oliveira GB, Kouyoumdjian JA. Carpal tunnel syndrome: Long-term nerve conduction studies in 261 hands. *Arq Neuropsiquiatr.* 2009;67(1):69-73.
- Katz RT. NC-stat as a screening tool for carpal tunnel syndrome in industrial workers. *J Occup Environ Med.* 2006 Apr;48(8):755-6
- Morse J. NC-stat Sytem, NeuroMetrix Inc. (Nerve Conduction Testing System). Technology Assessment. Olympia, WA: Office of the Medical Director, Washington State Department of Labor and Industries. Accessed on February 17, 2011 at: <http://www.lni.wa.gov/ClaimsIns/Providers/Treatment/SpecCovDec/NCstat.asp>.
- Morse J. NC-stat® System, NeuroMetrix® Inc. (Nerve Conduction Testing System). Technology Assessment. Olympia, WA: Office of the Medical Director, Washington State Department of Labor and Industries; June 8, 2006. Accessed on February 17, 2011 at: <http://www.lni.wa.gov/ClaimsIns/Providers/Treatment/SpecCovDec/NCstat.asp>.
- NeuroMetrix®. Product Information NC-Stat. Accessed on February 17, 2011 at: <http://www.neurometrix.com/products.htm>
- Perkins BA, Orszag A, Grewal J, Ng E, Ngo M, Bril V. Multi-site testing with a point-of-care nerve conduction device can be used in an algorithm to diagnose diabetic sensorimotor polyneuropathy. *Diabetes Care.* 2008 Mar;31(3):522-4.
- Vinik AI, Kong X, Megerian JT, et al. Diabetic nerve conduction abnormalities in the primary care setting. *Diabetes Technol Ther.* 2006 Dec;8(6):654-62.
- Weiskopf R. Electrophysiologic testing for the diagnosis of peripheral nerve injuries. *Anesthesiology.* 2004;100:1298-303.
- Physician Advisors