

## MP.043.MPC Nerve Conduction Velocity Studies/Electrodiagnostic Studies/Neuromuscular Junction Testing

Maryland Physicians Care considers **Electrodiagnostic studies** (EDX) which include nerve conduction (velocity) study (NCS), needle electromyography (EMG) and neuromuscular junction (NMJ) testing (repetitive nerve stimulation) to be useful in evaluating the integrity and function of the peripheral nervous systems (most cranial nerves, spinal roots, plexi, and nerves, neuromuscular junction, muscles) and its connection with the central nervous system.

Indications for **NCS** with needle EMG and NMJ Testing include but not limited to any of the following:

- Electrodiagnostic studies must be performed by qualified physicians, almost exclusively neurologists or physiatrists who are trained to perform EDX studies and correctly interpret results of NCSs and needle EMG
- Focal neuropathies or compressive lesions such as: carpal tunnel syndrome, ulnar neuropathies, or root lesions localization
- Traumatic nerve lesions, for diagnosis and prognosis
- Generalized neuropathies, such as metabolic (diabetic, uremic, etc.) toxic, hereditary or immune neuropathies
- Neuromuscular junction disorders such as myasthenia gravis, Lambert Eaton myasthenic syndrome (LEMS) or botulism
- Symptom-based diagnoses such as pain, paresthesia, or weakness in the extremity when appropriate pre-test evaluations are inconclusive and the clinical assessment and documentation unequivocally supports the need for a study.
- Radiculopathy-cervical, thoracic, lumbosacral
- Plexopathy including idiopathic, traumatic, inflammatory or infiltrative, radiation induced
- Myopathy including inflammatory myopathies like polymyositis and dermatomyositis, myotonic disorders, and congenital myopathies
- Precise muscle location for injections such as botulinum toxin, phenol, etc.

Note: Ongoing real-time assessment of data is required during the clinical diagnostic evaluation and especially during the needle EMG examination.

**Any** of the following are circumstances when NCS may be performed **without** a Needle EMG:

- Appropriate for acute cases of neuropathy and other nerve disorders including trauma (within 14 days of acute onset).

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- Appropriate for the evaluation of a neuromuscular junction disorder if a needle examination was already performed within the past 60 days (allows option of adding on repetitive stimulation in patient previously evaluated without it).

**EMGs** - Neurogenic disorders are distinguishable from myopathic disorders by a carefully performed EMG. Common disorders where an EMG will be helpful in diagnosis (but are not limited to):

- Nerve compression syndromes, including carpal tunnel syndrome and other focal compressions
- Radiculopathy – cervical, lumbosacral
- Mono/polyneuropathy-metabolic, degenerative, hereditary
- Myopathy – including poly and dermatomyositis, myotonic and congenital myopathies
- Plexopathy - idiopathic, trauma, infiltration
- Neuromuscular junction disorders - myasthenia gravis. Single fiber EMG is of special value here
- At times, immediately prior to botulinum toxin injection, for localization
- At times, immediately prior to injection of phenol or other substances for nerve blocking or chemodenervation
- Can be considered as an option for polyneuropathy and, therefore, may be omitted in acute cases of neuropathy and other nerve disorders including trauma since EMG changes do not occur for 14-21 days

**Note:** For “Frequency of Testing Guidelines”, please see the American Association of Neuromuscular and Electrodiagnostic Medicine reference (Table 1: Maximum Number of Studies Table).

## Limitations

1. Nerve Conduction (Velocity) Studies (NCSs) are only covered when performed with needle electromyogram except in occasional circumstances as described above
2. A clinical history from the referral source must clearly document the need for each test. Referral data containing pertinent clinical information must be available for review in instances where the need for a test may come under scrutiny.
3. Both NCSs and EMGs are required for a clinical diagnosis of peripheral nervous system disorders.
  - NCS are not covered in any of the following instances: Examinations using portable hand-held devices, which are incapable of real-time waveform display and analysis, will be included in the reimbursement for an Evaluation and Management (E & M) service. They will not be paid separately.

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- Devices that use fixed anatomic templates and computer-generated reports used as an adjunct to physical examination routinely.
  - Psychophysical measurements (current, vibration, thermal perceptions), even though they may involve delivery of a stimulus.
  - Segmental testing of a single nerve will not be covered on a multiple unit basis. For instance, testing the ulnar nerve at wrist, forearm, below elbow, above elbow, axilla and supraclavicular regions will all be considered as a one-unit test.
  - Different methods of measuring the conduction in the same nerve will not be reimbursed as separate services.
  - Narrative reports alluding to “normal” or “abnormal” results without numerical data will not be covered.
  - Regular repeated routine testing is often of questionable benefit and viewed as not medically necessary.
  - Screen testing for polyneuropathy (not mononeuropathies) of diabetes or end stage renal disease (ESRD) is not covered.
  - Current Perception Threshold/Sensory Nerve Conduction Threshold Test (sNCT) is investigational and not covered.
4. NMJ studies are not covered for the following:
- Any diagnosis not listed above in the indications criteria
  - Any diagnostic test or procedure that does not meet the CPT definition of code 95937 such as quantitative sensory testing by any means and sensory nerve conduction threshold testing.
  - Tests depending on the patient’s subjective response to single or repetitive stimulation (electrical, vibratory, thermal or tactile), regardless of whether or not these data are analyzed and presented through electronic or computerized systems.
5. NC-Stat (Neurometrix) and Neurostat are considered experimental and investigative due to lack of scientific evidence to support their effectiveness.

## Codes

CPT Codes / HCPCS Codes / ICD-10 Codes	
Code	Description
92265	Needle oculoelectromyography, 1 or more extra ocular muscles, 1 or both eyes, with interpretation and report

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95860	Needle electromyography, 1 extremity with or without related paraspinal areas
95861	Needle electromyography, 2 extremities with or without related paraspinal areas
95863	Needle electromyography, 3 extremities with or without related paraspinal areas
95864	Needle electromyography, 4 extremities with or without related paraspinal areas
95865	Needle electromyography, larynx
95866	Needle electromyography, hemidiaphragm
95867	Needle electromyography, cranial nerve supplied muscle(s), unilateral
95868	Needle electromyography, cranial nerve supplied muscle(s), bilateral
95869	Needle electromyography, thoracic paraspinal muscles (excluding T1 or T2)
95870	Needle electromyography, limited study of muscles in 1 extremity or non-limb (axial) muscles (unilateral or bilateral), other than thoracic paraspinal, cranial nerve supplied muscles, or sphincters
95872	Needle electromyography using single fiber electrode, with quantitative measurement of jitter, blocking, and/or fiber density, any/all sites of each muscle studied
95873	Electrical stimulation for guidance in conjunction with chemodenervation
95874	Needle electromyography for guidance in conjunction with chemodenervation
95885	Needle electromyography, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; limited (list separately in addition to code for primary procedure)
95886	Needle electromyography, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; complete, five or more muscles studied, innervated by three or more nerves or four or more spinal levels (list separately in addition to code for primary procedure)
95887	Needle electromyography, non-extremity (cranial nerve supplied or axial) muscle(s) done with nerve conduction, amplitude and latency/velocity study (list separately in addition to code for primary procedure)
95905	Motor and/or sensory nerve conduction, using preconfigured electrode

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	array (s), amplitude and latency/ velocity study, each limb, includes F-wave study when performed with interpretation and report
95907	Nerve conduction studies; 1-2 studies
95908	Nerve conduction studies; 3-4 studies
95909	Nerve conduction studies; 5-6 studies
95910	Nerve conduction studies; 7-8 studies
95911	Nerve conduction studies; 9-10 studies
95912	Nerve conduction studies; 11-12 studies
95913	Nerve conduction studies; 13 or more studies
95933	Orbicularis oculi (blink) reflex, by electrodiagnostic testing
95937	Neuromuscular junction testing (repetitive stimulation, paired stimuli), each nerve; any 1 method
<b>HCPCS codes NOT covered:</b>	
G0255*	Current perception threshold/sensory nerve conduction test (sNCT) per limb, any nerve
<b>*Code considered non-covered unless part of a NIH-certified study subject to medical necessity review.</b>	
<b>ICD-10 codes (All CPT codes except 95905 and 95937):</b>	
A05.1	Botulism food poisoning
A33-A35	Tetanus
B91	Sequelae of poliomyelitis
C70.0-C72.9	Malignant neoplasms of brain and other parts of central nervous system
C79.31-C79.52	Secondary malignant neoplasm of brain, cerebral meninges, and other parts of nervous system
D32.0-D33.9	Benign neoplasm of meninges, brain, and other parts of nervous system
E08.40-E08.618	Diabetes mellitus due to underlying neurological conditions
E09.40-E09.610	Drug or chemical induced diabetes mellitus with neurological complications
E10.40-E10.65	Type 1 diabetes mellitus with complications
E11.311-E11.618	Diabetes type 2 with neurological complications

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E13.311-E13.618	Other specified diabetes mellitus with neurological complications
E51.2-E51.9	Other manifestations of thiamine deficiency
E56.0-E56.8	Deficiency of other vitamins
E56.9	Vitamin Deficiency Unspecified
E78.6	Lipoprotein deficiency
G04.1	Topical spastic paraplegia
G14	Postpolio syndrome
G20-G21.4	Parkinson's disease
G24.01-G24.9	Dystonia
G25.0-G25.9	Other extrapyramidal and movement disorders
G11.0-G13.8	Hereditary ataxia, spinal muscular atrophy and related syndromes, and systemic atrophies primarily affecting central nervous system in diseases classified elsewhere
G35	Multiple sclerosis
G36.0-G37.9	Other acute disseminated or other demyelinating diseases of central nervous system
G50.0-G59	Nerve, nerve root and plexus disorders
G60.0-G65.2	Sequelae of inflammatory and toxic polyneuropathies
G70.00-G73.7	Diseases of myoneural junction and muscle
G80.0-G80.9	Cerebral palsy
G81.00-G81.94	Hemiplegia and hemiparesis
G82.20-G83.9	Paralytic syndromes
G90.01-G90.9	Disorders of autonomic nervous system
G95.0-G95.9	Other and unspecified diseases of spinal cord
H02.141-H02.149	Spastic ectropion of eyelid
H49.00-H52.7	Disorders of ocular muscles, binocular movement, accommodation and refraction
H53.2	Diplopia
I95.1	Orthostatic hypotension
J38.00-J38.02	Paralysis of vocal cords and larynx
J38.5	Laryngeal spasm

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J38.7	Other disease of larynx
K22.0	Achalasia of cardia
M21.00-M21.969	Other acquired deformities of limbs
M30.0-M36.8	Systemic disorders of connective tissue in diseases classified elsewhere
M43.00-M43.19	Spondylolisthesis site unspecified
M47.011-M47.9	Spondylosis
M48.00	Spinal stenosis, site unspecified
M48.02	Spinal stenosis, cervical region
M48.061	Spinal stenosis, lumbar region without neurogenic claudication
M50.00-M54.9	Other dorsopathies
M60.000-M60.09	Myositis
M62.00-M62.9	Other disorders of muscle
M79.0-M79.2	Rheumatism, myalgia, and neuralgia and neuritis, unspecified
M79.601-M79.676	Pain in limb, unspecified
M96.1	Post laminectomy syndrome, not elsewhere classified
Q05.0-Q05.9	Spina bifida
Q06.2	Diastematomyelia
Q07.01	Arnold-Chiari syndrome with spina bifida
Q07.03	Arnold-Chiari syndrome with spina bifida and hydrocephalus
Q68.0	Congenital deformity of sternocleidomastoid muscle
Q85.00-Q85.09	Neurofibromatosis and Schwannomatosis
R20.0-R20.9	Disturbances of skin sensation
R25.0-R25.9	Abnormal involuntary movements
R26.0-R26.9	Abnormalities of gait and mobility
R27.0-R27.9	Other lack of coordination
R29.3	Abnormal posture
R29.810	Facial weakness
R29.898	Other symptoms and signs involving the musculoskeletal system
R41.0-41.9	Other symptoms and signs involving cognitive functions and awareness



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R47.01-R47.9	Speech disturbances, not elsewhere classified
R49.0-R49.9	Voice and resonance disorders
R53.0-R53.83	Malaise and fatigue
R94.131	Abnormal electromyogram (EMG)
S04.01-S04.9XXS	Injury to the optic and other cranial nerves
S12.000A-S14.104S	Fracture of cervical vertebra and other parts of neck
S14.0XXA-S14.9XXS	Injury of nerves and spinal cord at neck level
S22.00A-S22.9XXS	Fracture of rib (s), sternum and thoracic spine
S24.0XXA-S24.9XXS	Injury of nerves and spinal cord at thorax level
S32.000A-S32.9XXS	Fracture of lumbar spine and pelvis
S34.01XA-S34.9XXS	Injury of lumbar and sacral spinal cord and nerves at abdomen, lower back, and pelvis level
S44.00XA-S44.92XS	Injury of nerves at shoulder and upper arm level
S74.00XA-S84.929S	Injury of nerves at lower leg level
<b>ICD-10 codes specifically for 95905:</b>	
G56.00-G56.93	Carpal tunnel syndrome and mononeuropathies of upper limb
<b>ICD-10 codes specifically for 95937:</b>	
A05.1	Botulism food poisoning
A48.52	Wound botulism
G12.0-G12.9	Spinal muscular atrophy and related syndromes
G61.0	Guillain-Barre syndrome
G62.80-G62.81	Critical illness polyneuropathies
G70.0-G70.9	Myasthenia gravis and other myoneural disorders
G71.11-G71.12	Myotonic muscular dystrophy and congenita
G72.3	Periodic paralysis
G72.81	Critical illness myopathy
G73.1	Lambert-Eaton syndrome
G73.3	Myasthenic syndromes in other diseases classified elsewhere
H02.401	Unspecified ptosis of right eyelid
H02.402	Unspecified ptosis of left eyelid



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H02.403	Unspecified ptosis of bilateral eyelids
H02.049	Spastic entropion of unspecified eye, unspecified eye
H02.409	Unspecified ptosis of unspecified eyelid
R13.0-R13.19	Dysphasia
H53.019	Deprivation amblyopia, unspecified eye
R47.02	Dysphasia
R47.1	Dysarthria and anarthria
R47.81-R47.9	Slurred speech, other speech disturbances
R49.0-R49.9	Voice and resonance disorders

## References

1. American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM). Position Statement: Model Policy for Nerve Conduction Studies and Needle Electromyography. Updated and re-approved: December 2022.  
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2. American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM). Position Statement: Recommended Policy for Electrodiagnostic Medicine. Approved: January 2023.  
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