

## *About the Doctor*



Dr. Mike M. Pappas completed his training in Physical Medicine and Rehabilitation at Columbia/Cornell- NY Presbyterian Medical Center. He completed his training in electrodiagnostic medicine at the Neurological Institute of New York-Columbia Presbyterian Medical Center where he studied under world renowned electromyographers.

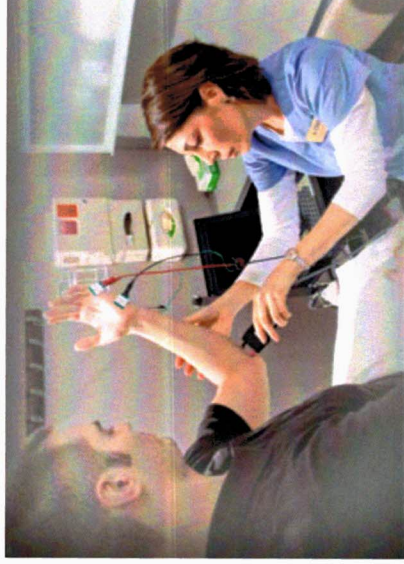
He has extensive experience in performing EMG/NCV testing, having performed thousands of studies. Currently, he is a clinical instructor in the department of Physical Medicine and Rehabilitation at Mt. Sinai Medical Center.



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# Patients Guide to EMG/NCV testing



## *What is an EMG/NCV test?*

EMG/NCV testing (also known as an electromyogram or electromyography) is a test that is used to study nerve and muscle function. The test is performed by either a physiatrist or a neurologist who has specialized training in performing the procedure. EMG/NCV testing can provide your doctor with specific information about the extent of nerve and/or muscle injury and can also determine the exact location of injury and give some indication whether the damage is reversible.

## *Why has this test been ordered?*

If you have been experiencing symptoms of numbness, decreased sensation, tingling, radiating pain, or burning, your doctor may refer you for an EMG/NCV. EMG/NCV testing may also be used to further evaluate muscle spasms, weakness, and difficulty walking. Conditions that EMG/NCV testing helps diagnose include carpal tunnel syndrome, a pinched nerve, radiculopathy, sciatica, neuropathies, muscle diseases, muscular dystrophy, ALS (Lou Gehrig's disease), and myasthenia gravis.

## *What should you expect?*

There are two parts to EMG/NCV testing: a nerve conduction study (NCV) and a needle exam for muscle testing. Both may result in some

discomfort, but are usually well tolerated without the need for medication beforehand. The nerve conduction study entails stimulating certain nerves in the upper and/or lower extremities with brief, small electrical impulses to the skin surface and recording the response which can be measured for any abnormalities. The needle exam involves inserting a very fine needle (usually the size of an acupuncture needle) into several muscles. The needle has a microscopic electrode that picks up both the normal and abnormal electrical signals given off by a muscle. Routinely, your doctor will perform both parts of the procedure, but there are situations where only the nerve conduction or muscle testing is performed.

EMG/NCV testing usually takes anywhere from 30 to 90 minutes, depending on the condition being tested and findings of the study. A report that includes the results and an interpretation will be sent to your doctor.

## *What you should know before the exam.*

An EMG/NCV test is extremely safe. Patients on anticoagulation or blood thinners such as Coumadin should notify the physician performing the test. Patients on medication should take their usual medication on the day of the test. Patients should not wear any lotion on the day of the exam. No other special preparation is necessary.