

**ELECTRODIAGNOSTIC EVALUATION
(EMG/NCV)**

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Overview:

You have been scheduled for a test designed to analyze a portion of your peripheral neuromuscular system. This is a test that can evaluate arm or leg (extremity) or cervical / lumbar spine nerves. Dr. Kaplan will review your medical record prior to the appointment. He will determine the question or problem that requires analysis, and frequently he will correspond with other clinicians in your case before or after the evaluation. You will need to fill out some limited historical paperwork before your appointment, and you will be interviewed (inquiry of past history, symptoms, medications) and examined (neuromuscular) on the day of your appointment.

This test can be helpful in diagnosing a pinched or entrapped nerve in the hands or feet. This can be due to conditions or diseases like carpal tunnel syndrome, cubital tunnel syndrome, tarsal tunnel syndrome, neuropathy, or from a herniated disc with “sciatica” or “radiculopathy”. These studies can also reveal a cause for pain in the hands, feet, extremities, or spine.

Nerve Conduction Study (NCV):

In most instances, you will be asked to rest comfortably on a padded exam table. You will have a pillow for your head, and we can play calming music for you. Try to keep your extremities warm before the test. Hands to be tested may be warmed with a hot-pack only if they are cool. Small surface electrodes will be taped to parts of your hands (or feet) and some water soluble gel will be utilized. Segmental measurement and drawing with non-permanent markers will be completed.

A device will be held against your skin and is used to apply a small electrical stimulus in order to identify the nerve conduction patterns. The electrical impulse travels along the path of the identified nerve and a response is recorded on the computer. Most patients describe the “shock” as unusual, annoying, or minimally uncomfortable. It can be perceived as a “tingling sensation”. It is harmless, however, and 100% safe. Dr. Kaplan has performed thousands of these conduction; he will explain the evaluation with you on the day of your test. The speed and size (amplitude) of the nerve conduction will be analyzed.

A computer will display, store, and print the data. Usually your test will average approximately 30 minutes when multiple nerve segments are analyzed in order to obtain or rule out a diagnosis.

After the nerve testing, the pen marks can be washed off and you will go home. In most cases, Dr. Kaplan will review the results with you in a limited fashion, however your referring physician will review the dictated report within 48 to 72 hours and you will most likely follow up with that physician in the outpatient setting.

EMG (Electromyography):

Following the nerve test it may be necessary to analyze specific muscle groups, especially as they relate to specific nerve segments or to complaints that you may have, like weakness or some other change in function.

A sterile, disposable pin electrode (like a small acupuncture needle) may be placed into selected muscles in your body, predominantly in the involved limb(s). This can be associated with some discomfort, aching, or pressure, but with proper relaxation, the testing can be completed rapidly. In the majority of patients, there is no residual discomfort when they leave the office.

Muscles will be tested at rest and then with some voluntary contraction. Speakers allow for auditory interpretation of electrical activity in the muscle during testing. Upon completion of the test, (an average of 5-10 minutes in most cases), mild soreness or tenderness usually resolves rapidly, although, ice can be useful if there is any residual soreness. The pin electrode is disposable and is not reused.

Results and conclusions from this portion of the test will be combined with those of the nerve conduction testing in the transcribed report.

Preparing for the Test:

It is generally helpful to bathe or cleanse the skin on the day of your test. Body oils should be removed and it is **NOT advised to use any moisturizers, lotions, or creams on the day of the test.** These can interfere with the surface conduction tests.

Be sure to inform Dr. Kaplan about any medications, especially if you take a blood thinner. It is also important for him to know if you bruise easily, have hemophilia or diabetes, have any skin infections or skin allergies to tape, or if you have a pacemaker.

Please wear loose fitting clothes. Any long sleeves or pants need to be able to be pulled or rolled up above the elbow or knee. If not, you may be asked to change into a gown or shorts. Dr. Kaplan may need to test lower back or neck muscles, and in those cases, a gown may be required depending on the clothing that you are wearing.

Anxiety is normal. However, most patients find the test to be much easier than they had expected. You should feel comfortable talking with Dr. Kaplan during the testing to relieve any fears or anxieties that you may have.