



OKLAHOMA SPINE SPORTS & REHABILITATION

a division of Neuroscience Specialists

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ELECTRODIAGNOSTICS (NERVE CONDUCTION STUDIES AND ELECTROMYOGRAPHY)

PATIENT INSTRUCTION & EDUCATION: Nerve conduction studies (NCS) and electromyography (EMG) assess the electrical function of your nerves and muscles in an effort to determine if they are working properly and identify a potential cause of your symptoms.

Electrodiagnostics are composed of NCS and EMG. Testing usually begins with nerve conduction studies followed by electromyography.

NERVE CONDUCTION STUDIES (NCS): The nerve conduction study portion of the EMG shows how the body's electrical signals are traveling in the nerves. This is done by applying electrical shocks to one point on the nerve and recording from another. These shocks cause a quick, tingling feeling, but go away quickly. The physician may have to test several nerves depending on your symptoms. Bilateral (left, right) testing may be indicated for comparison.

EMG (Electromyography): For the needle EMG portion of electrodiagnostics, a small acupuncture – like needle is inserted into the muscle. The electrical activity of the muscle is then assessed. You may be asked to contract the muscle to see how the contraction changes the activity. There may be a small amount of pain when the needle is inserted. The doctor will examine muscles in an effort to screen for various muscle diseases as well as nerve injury producing muscle weakness. A new sterile needle is used for each patient, and it is discarded after the test. If you cannot tolerate the test, this can be stopped at any time upon your request.

TEST DURATION: The average test takes 30-60 minutes per extremity to complete. For example, electrodiagnostics of the right arm and left leg may require 1 to 2 hours.

HOW TO PREPARE: Please inform our laboratory several days prior to your test date if you are taking blood thinners (such as Coumadin, Plavix, Pradaxa, Effient, Ticlid, or Xarelto). If so, you will require clearance from the physician who prescribes this medication to temporarily discontinue it for the electrodiagnostic procedure. In addition, please inform our staff if you have been diagnosed with a blood disorder which predisposes you to bleeding or an infectious disease such as HIV or hepatitis C.

Take a bath or shower to remove oils from your skin within 24 hours prior to the test. Do not apply any body lotion, Vaseline, perfumes, or oils to your skin on the day of the test. These substances may adversely affect the ability to record electrical nerve and muscle responses.

Dress warm for your appointment. Try to keep your extremities warm with a long sleeved shirt, long pants, socks and closed toe shoes. If your extremities are cold, nerve function is altered.

AFTER THE TEST: You may resume your normal activities. Apply ice to tender areas as needed. Alert the office if there are any concerns following the test.

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