Keck Medical Center of USC
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Department of Neurology • Leslie P. Weiner Clinics • Cognitive and Behavioral Neurology Clinic • Comprehensive Epilepsy Center • Comprehensive Stroke Center • Center for Parkinson's Disease and Movement Disorders • Multiple Sclerosis and Immunologic Disorders Clinic • Neurogenetics Clinic • Neuromuscular and Neurophysiology Clinic • Neuro-oncology Clinic •Neuropsychology Clinic

EMG Patient Instructions

What is an EMG/NCS Test?

Electromyography (EMG) is a diagnostic procedure to assess the health of muscles and nerves. Neurons transmit electrical signals that cause muscles to contract. An EMG translates these signals into graphs, sounds or numerical values that a specialist interprets. An EMG uses tiny devices called electrodes to transmit or detect electrical signals.

During a needle EMG, a needle electrode is inserted directly into a muscle which records the electrical activity in that muscle.

A nerve conduction study (NCS), another part of an EMG, uses electrodes taped to the skin to measure the speed and strength of signals traveling between two or more points.

Both tests may result in some discomfort but are usually well tolerated.

How to prepare for your test:

- Eat your normal meal on the day of the test and continue any medication you are taking unless otherwise instructed.
- Take a shower or bath before your exam to remove oils from your skin.
- Do not apply creams/ lotions/ oils on hands, arms, legs, and feet.
- Remove all jewelry (rings or bracelets) and wristwatch.
- Please try to keep your hands and feet warm before the test.
- Please wear loose-fit clothing.

What are the risks of EMG /NCS testing?

EMG is a low-risk procedure, and complications are rare. There is a small risk of bleeding and infection where the needle electrode is inserted.

What do I expect after an EMG/NCS test?

You may experience some muscle soreness and temporary minor bruising where the needle electrode is inserted into your muscle. This bruising should fade in several days. If it persists, contact your primary care doctor. An interpretation will be discussed at the end of the appointment and results will be sent to your doctor.