

## Understanding NCS

### WHAT IS NCS TESTING?

This is a test of the nerves in our bodies. Nerves control muscles, and mediate sensation. Using a brief electrical stimulation (it feels like a strong static electrical shock), individual nerves in the limbs are tested for how well they transmit signals.

### WHAT IS NCS TESTING USED FOR?

To evaluate for nerve damage, or diagnose nerve diseases. This testing is commonly used to evaluate for singular nerve lesions such as carpal tunnel syndrome, radiculopathy (pinched nerves in the spine), or assess for neuropathy.

### WHAT IS EMG (ELECTROMYOGRAPHY) TESTING?

Your doctor may or may not have ordered further nerve testing with EMG, which is sometimes done in addition to NCS testing. When a nerve is not functioning normally, the muscles the nerve controls become weak and dysfunctional. With EMG testing, a thin needle is placed into one muscle at a time to study its electrical activity and evaluate for signs of nerve damage. This test is also helpful to screen for muscle diseases.

### MY DOCTOR ONLY ORDERED A NCS TEST, DO I HAVE TO HAVE THE EMG?

No, but be aware that some medical insurance requires that at least one muscle be evaluated with EMG at the time of NCS testing.

### HOW MANY NEEDLE STICKS WILL THERE BE?

Depending on the problem being evaluated, EMG testing may not be necessary. When EMG is performed, there are usually between 1-5 needle sticks per limb being evaluated.

### HOW PAINFUL IS IT?

The needle is very thin, and usually not much more painful than having blood drawn.

### WHAT IF I AM ON BLOOD THINNERS?

EMG can still be safely performed with most blood thinners, such as aspirin, Plavix, Aggrenox, dipyridamole, or Brilinta. Contact your provider if you are taking Coumadin (Warfarin), Pradaxa, Eliquis, or Xarelto as you may have to hold these medications prior to EMG testing.

### WHAT ELSE DO I NEED TO KNOW?

There is no need to fast before this test. Wear loose fitting clothing; a gown will be provided if needed. Your skin needs to be clean, but do not apply any skin lotion on the day of your test. There is no evidence for harm with NCS/EMG testing during pregnancy. Routine NCS testing is safe to perform in patients with implanted electrical devices such as pacemakers or defibrillators. EMG testing is also safe to perform in patients with a history of axillary lymph node resection, such as for breast cancer.