# What is an Electromyography (EMG)

EMG is a diagnostic procedure that evaluates the health condition of muscles and the nerve cells that controls them. The EMG translates your muscle contractions and relaxations into graphs or numbers.

An EMG can help doctors diagnose muscle disorders, nerve disorders, and disorders affecting the connection between nerves and muscles.

There are two components to an EMG test. The nerve conduction study and the needle EMG

What happens during an EMG:

- You will be asked to lie down on an examination table or sit on a chair and the doctor might ask you to move into different positions during the procedure
- For the nerve conduction study small sensors patches will be placed on your skin
- For the second part called the needle EMG, your skin will be cleaned and little needle electrodes will be inserted directly into the muscle tissue to evaluate muscle activity when at rest and when contracted.

During both parts of the EMG procedure, the electrodes will deliver tiny electrical signals to your nerves. A computer will translate these signals that ca be interpreted by your doctor. The entire procedure should take between 30 to 60 minutes.

# What is a Nerve Conduction Velocity Test (NCV)?

A NCV test is used to assess nerve damage and dysfunction. The procedure measures how quickly electrical signals move through your peripheral nerves. Those nerves are located outside of your brain and along your spinal cord. The peripheral nerves help you control your muscles and experience the senses. Healthy nerves send signals more quickly and with greater strength than damaged nerves.

The NCV test helps your doctor differentiate between an injury to the nerve fiber and an injury to the myelin sheath, the protective covering surrounding the nerve.

Here is what to expect:

You will be asked to remove any metal objects, such as jewelry that could interfere with the procedure

- You may need to remove some clothing and wear a gown
- You will sit or lie down for the test
- Your doctor will place two electrodes on your skin, one that stimulates the nerve and one that records the stimulation. Some gel may be used to help the electrode stick to the skin
- The nerve will be stimulated by a mild and brief electrical shock.

The entire test may take 20 to 30 minutes. The sensation may be uncomfortable, but typically isn't painful.

# How do I prepare for a NCV test?

Before the test you should take the following steps:

- Take a shower or bathe one day before the exam and scrub away oils or lotions.
- Wear comfortable, loose clothing
- Do **NOT** use bath oils, lotions or creams
- You should inform your doctor is you are taking any blood thinners or a pacemaker
- Please bring a list of your current medication regimen