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Electromyography (EMG)

Electromyography, or EMG, involves testing the electrical activity of nerves and muscles. We use this term to include both the needle test and the nerve conduction test. The EMG or needle test involves testing the electrical activity of the muscles. The *nerve conduction study* measures the electrical conduction of the nerves and aids in the diagnosis of peripheral nerve disorders.

Nerves work like electrical wires and carry electrical information to and from the brain. Stimulation of the nerves in the *nerve conduction test* will cause the muscles to contract. Measurement of these impulses will allow us to determine whether there is a problem with the nerves and muscles being tested. The *needle test* or *EMG* directly measures the electrical activity of the muscles. This reflects both the health of the muscles being tested and the nerves that are attached to those muscles.

EMG and nerve conduction studies may aid with the diagnosis of:

- Nerve compression or injury (such as carpal tunnel syndrome)
- Nerve root injury (such as radiculopathy, ie: pinched nerve or back,
- Diabetic & other peripheral neuropathies.
- Other problems of the muscles or nerves.
- Uncommon conditions including amyotrophic lateral sclerosis, myasthenia gravis, and muscular dystrophy.

EMG Preparation

- Take a bath or shower to remove all oil from your skin. ***Do not use body lotion or powder on the day of the test.***
- On the day of the appointment please bring a list of any medications you are taking.
- Tell Dr. Dwyer or Leschek if you are taking aspirin, blood thinners (like Coumadin,) or have a pacemaker, or have hemophilia. *There is no danger to your heart.*
- If you have myasthenia gravis, please call 24-48 hours prior to your appointment and ask if you should take any medications before your EMG test.

Procedure

- With *nerve conduction studies*, small electrodes will be applied to your skin or placed around your fingers. You will experience a mild electrical shock, which may be a bit unpleasant. Most people find it only slightly annoying.
- During the *EMG needle test*, small pins or needles are inserted into muscles. You will be asked to contract your muscles by moving a small amount during the testing. *Not everyone requires this part of the test.*
- All tests are administered and interpreted by Dr. Leschek or Dwyer. The procedure will be explained in detail prior to testing of muscle activity.
- Testing will take 30-60 minutes.

After the Procedure

Dr. Leschek or Dwyer will share the results with you and answer any questions you may have. They will immediately share the results with your referring physician with whom you will be referred back to for any future work up or treatment as indicated.