



## Neurodiagnostic Laboratory

NEUROLOGY – SLEEP DISORDERS – PHYSICAL MEDICINE – MRI  
In Dover and Milford, Delaware <http://cnmri.com> 302-678-8100

### INFORMATION REGARDING YOUR EMG

ELECTROMYOGRAPHY (EMG) AND NERVE CONDUCTION STUDIES (NCS) are used to diagnose diseases of nerve and muscle. An EMG study consists of several parts. A focused history and neurologic examination will be obtained. The nerve conduction portion of the examination involves stimulating certain nerves in either the arms or legs. The time it takes for the impulse to travel in the nerve is measured. If the response time is slow, reduced in size or absent, a pinched or diseased nerve is suggested.

The last part of the examination, the electromyogram, is only done in special circumstances. EMG involves the insertion of a tiny needle into a muscle and recording electrical activity. A new, sterile needle is used for each patient. An abnormal electrical pattern on EMG evaluation may be the result of either nerve or muscle dysfunction.

**WHY ARE EMG STUDIES DONE?** EMG studies can help to evaluate numbness, “pins and needles” or other abnormal sensations, muscle weakness and pain in the upper or lower extremities. Carpal tunnel syndrome, a condition presenting with numbness of the hands, is frequently confirmed with EMG. EMG studies are sometimes used in patients with neck or back difficulties. Nerve disorders such as peripheral neuropathy and muscle disorders, such as polymyositis or amyotrophic lateral sclerosis are commonly assessed with EMG and nerve conduction studies.

**ARE EMG STUDIES UNCOMFORTABLE?** Some discomfort occurs when the nerve is stimulated or the needle is inserted. It only lasts a split-second and is usually well tolerated. Some patients have minor, temporary bruising or localized muscle inflammation after the test. You should tell the doctor if you are particularly susceptible to infections, take blood thinners, have been infected by the AIDS virus or have a history of hepatitis.

**HOW SHOULD YOU PREPARE FOR AN EMG?** Really, little needs to be done. You should bathe or shower before the study. Wash your arms and legs to remove any body oils. ***Do not use lotions, creams, or bath oils as these may interfere with the study.*** It is good to wear comfortable, loose clothes. There are no restrictions in terms of meals. During the study, you should try to relax. You may be asked to contract certain muscles or position your body during the exam.

**ARE THERE ANY SPECIAL PRECAUTIONS?** You should inform the physician prior to the examination if you are on blood thinners or have hemophilia. The physician should also be informed if you have a cardiac pacemaker or use a transcutaneous electrical nerve stimulator (TENS) unit. If you have myasthenia gravis, you should ask your physician whether or not to take medications, such as Mestinon, before the examination.

**WHO PERFORMS EMG STUDIES?** EMG and nerve conduction studies are performed by neurologists and physiatrists with specialized training in the diagnosis of nerve and muscle disorders. A specially trained neurodiagnostic technologist may assist in the nerve conduction portion of the examination. A report will be prepared for your physician after the study is completed. Your doctor will correlate the EMG and nerve conduction results with your difficulties to aid in the diagnosis of your condition.

If you have any questions, feel free to contact the office at (302) 678-8100 or toll free at (877) 678-8100