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EMG/NCV Test

What is this test?

The test is called EMG/NCV. EMG stands for 'Electromyography' and NCV stands for 'Nerve Conduction Velocity' which means electrical testing of muscles and nerves respectively. Sometimes EMG/NCV is thought to be a treatment of some sort, or a type of acupuncture. But remember that this is not true. It is only a test, just like an ECG or an X-ray.

What happens during the test?

During this test, you will be lying or sitting on an examination table, next to an EMG machine (which looks like a desktop or laptop computer). The test consists of two parts, though at times one may be done without the other. The first part is called nerve conduction studies. In this part, brief repeated electrical shocks are delivered to the nerves of arm or leg to determine how fast or slowly your nerves are conducting the electrical current. These shocks are tolerable and do not cause any long lasting damage. As there are several nerves in each extremity which need to be tested, the procedure is repeated 3-4 times or more per extremity studied. To check each nerve, more than one electrical shock is given. During the nerve conduction study, the doctor or the technician performing the study will occasionally be pausing to make calculations and measurements.

The second part of the test is called needle examination. In this test thin and fine needle is inserted in the muscle so as to record muscle activity. These needles are sterile. You can ask for a new needle, but then you will have to pay extra. The painful part of this section is when the needle is first inserted through the skin. The pain is not severe and is bearable. During the needle examination, no electrical shocks are delivered. On the average, a muscle can be tested 1-5 minutes though this may vary with the type of problem being investigated. In a given patient 2-5 muscles are tested, but this may vary.

Will I get any pain or discomfort during the test?

The electrical shocks given during nerve test and needle insertion in muscle test are painful. But the pain is tolerable. It does not last for long period. Sometimes a worried

person may sweat or feel dizzy by seeing needle or by pain of it. If you get such feeling, please inform the technician; otherwise you may faint!

How long does the test last?

On average, the nerve conduction takes anywhere between 15 to 45 minutes. The needle examination usually takes 5 to 20 minutes. So you need to spare 30-60 minutes for the test.

What preparations are necessary for the test?

No preparations are needed for the test. You do not need to fast. You can drive yourself to and from the test. You need not bring a friend or a relative with you. You can resume your regular activity immediately after the test is completed. With few exceptions, you may continue taking medication prescribed by your physician. However, if you are taking a blood thinner, you should notify it, since in that case the needle part of the test may cause bleeding inside the muscle.

Can I ask for some pain medication after the test?

Usually the pain is not very severe and any pain medication is not necessary. You may however take pain killer if needed.

How soon will I find out the results?

The results are not ready immediately. The doctor has to see and analyze you record. Typically the technician will inform you when you will get the results. It may even take up to 1 day in complicated cases. Be patient for the results.

What are some problems for which the test is ordered?

EMG/NCV is usually ordered when patients are having problems with their muscles or nerves. If you have any doubts as to why you need this test, ask your doctor.

How much will the test cost?

It is always best to inquire about cost at the onset. The cost may vary as per center and as per time for which test is done.

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Where do I get some additional information about EMG/NCV?

- http://www.nlm.nih.gov/medlineplus/ency/article/003929.htm
- http://www.webmd.com/brain/electromyogram-emg-and-nerve-conduction-studies