

## **Advanced Interventional Spine & Sports Medicine Center**

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### **Nerve Conduction Studies (NCS) and Electromyography (EMG)**

- NCS and EMG are done to test muscles and nerves.
- It is an in-office procedure and does not require hospitalization.
- On average, an EMG takes anywhere between 30 minutes and 2 hours.
- It can be done at any time during the day.
- An EMG is a test like an EKG or an X-ray and is not a treatment.

### **Preparation**

Few preparations are needed on the day you have an EMG.

- If required, please obtain a referral from your primary care physician and bring it along with you.
- Please do not apply any lotion, cream or ointment on the day of test.
- You may be required to change into a gown for the test.
- You can have regular meals before the test.
- You can drive yourself.
- You can go back to work after the test.
- Take all your medications on the day of the test.
- If required, you can take pain medication (Tylenol, Motrin) before the test.
- No sedation is given during the test.
- If you are taking a blood thinner (aspirin, plavix, coumadin, lovenox, etc) there is a chance of bleeding in to your muscles during needle EMG. Please notify your physician if you are taking any of these medications.

### **Procedure**

During this test, you will be lying on an examination table, next to an EMG machine (which looks like a computer). The test consists of two parts. At times one may be done without the other.

1. Nerve Conduction Studies
2. Electromyography

The first part is called **Nerve Conduction Studies**. In this part brief electrical shocks are delivered to your arm or leg similar to a “funny bone feeling”, one gets when the elbow hits a hard surface.

The procedure consists of stimulating a nerve and the response is recorded by the electrodes. The strength of the current varies and the electric shock at times may be uncomfortable. As the electric stimulation is for a brief duration there is no discomfort in between stimulations and will not last long. The response is recorded on the computer and can be observed on the computer screen. As there are several nerves in a limb, the procedure is repeated to test the different nerves.

The second part of the test is called **Needle Examination**. A needle is stuck into different muscles and the response is recorded on the computer screen. The needles are thin, fine and about one and a quarter inches long. They are thinner than the needles used to draw blood. Usually 5-6 muscles are tested in each limb and at times other muscles in the body may be tested depending on the diagnosis. No electric shocks are delivered at time of the needle EMG test.

**Results:** The test results will be ready later that day and will be faxed or mailed to your primary care physician and the referring physician.