

## ELECTROMYOGRAM (EMG) LABORATORY EXAMINATION

AT CHILDREN'S HOSPITAL OF PITTSBURGH OF UPMC, we believe parents and guardians can contribute to the success of this test and invite you to participate. Please read the following information to learn about this test and how you can help.

### Fast Facts About the EMG Laboratory Examination

- The electromyogram (EMG) laboratory examination is a test that tells the doctor about your child's nerve and muscle function.
- The EMG laboratory exam includes an EMG needle test and nerve conduction tests.
- The EMG laboratory exam is safe.
- No home preparation is necessary.
- A complete EMG laboratory test takes about 1 hour.
- Your child will be able to resume normal activities immediately after the test.

### What Is the Electromyogram (EMG) Laboratory Examination?

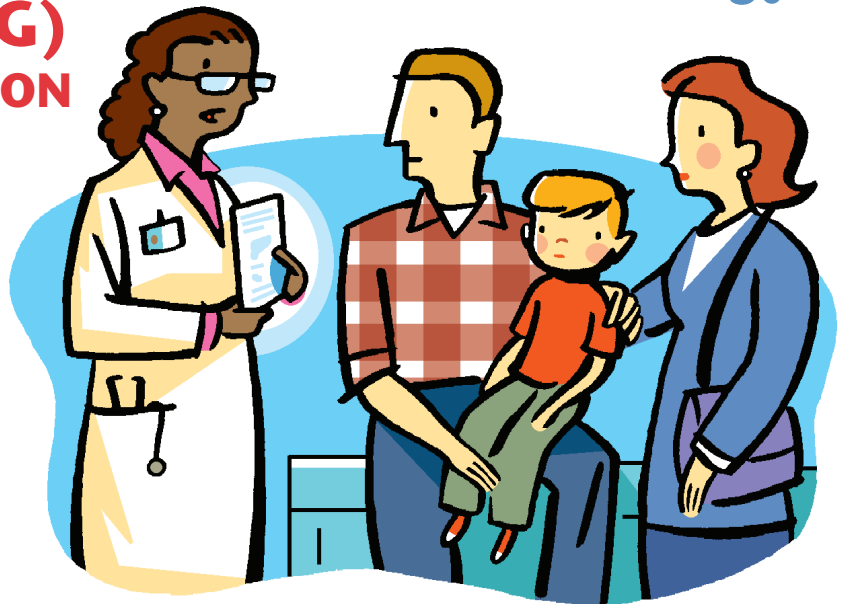
The electromyogram (*e-leck-tro-MY-o-gram*) or EMG laboratory examination is a test that tells the doctor about your child's nerve and muscle function. This test is often done when a child has weakness in his or her arms or legs. It helps doctors figure out if the weakness is due to a muscle condition or a nerve disorder. Information from the exam will help the doctor diagnose your child's condition, which is the first step toward starting treatment.

The EMG laboratory exam includes an EMG needle test and nerve conduction tests.

- The EMG needle test uses small needles inserted into certain muscles to record muscle activity. Inserting the needles feels like sharp pinpricks.
- Nerve conduction tests use disks on the skin to record how nerves and muscles react to mild electrical impulses.
- Both the EMG needle test and nerve conduction tests are safe.

### Home Preparation

No special home preparation is needed for the EMG laboratory examination.



### The Needle Test

The EMG needle test records muscle activity at rest and during movement. Your child may feel some mild discomfort, but no sharp pain.

- The EMG needle test uses small needles that are inserted into certain muscles to record the muscle activity.
- When the small needles are inserted, it will feel like a sharp pinprick.
- Sometimes, a child may feel a mild, dull ache while the needle is in place.
- These needles detect electrical activity in the muscle.
- After the needles are in place, your child might be asked to contract a certain muscle. For example, your child might be asked to bend his or her leg.
- The electrical activity of the muscles is shown on an oscilloscope (*os-SIL-lo-scope*) and may also be heard through a microphone.

### The Nerve Conduction Test

The nerve conduction test is usually done at the same time as an EMG needle test. The nerve conduction test is done by placing disks on the skin over certain nerves and muscles and recording how they respond to mild electrical impulses.

- These electrical impulses feel like little "shocks," similar to the static shock you feel when you touch a door knob after walking across a wool rug.
- The response of the nerves is recorded, which allows doctors to study the activity.
- This test is safe.

## ELECTROMYOGRAM (EMG) LABORATORY EXAMINATION **cont'd**

### A Parent's/Guardian's Role During the EMG Laboratory Exam

We welcome your help and support during this test. One parent or guardian is invited to join your child in the examination room. Other adults and children must stay in the waiting area.

- The most important role of a parent and guardian during the test is to help your child stay calm and relaxed during the test. The best way to help your child stay calm is for you to stay calm.
- We encourage you to talk to your child and hold his or her hand through the test.
- You may bring along a "comfort" item—such as a favorite stuffed animal or "blankie"—for your child to hold during the test.
- Please do not distract the medical team or interrupt the test in any way.
- We welcome your questions, but please ask them either before or after the test.

It is also important to talk to your child about the test, before the test. Here are a few suggestions:

- Explain that he or she is going to have a test done.
- If your child is old enough to understand, explain what will happen during the test using simple words.
- Be honest. Tell your child the EMG needle test will feel like little pinpricks and the nerve conduction test will feel like tiny shocks.

### After the Test

After the test, the small needles and the disks will be removed.

- There are no after-effects from this test.
- Your child can return to his or her normal activities after the test.
- A report of your child's EMG laboratory exam will be sent to the doctor who prescribed it. If the results are urgent, the referring doctor will be contacted immediately.
- Please contact the doctor who ordered the test for the results.
- If you have any other questions or concerns about the EMG laboratory exam, please call the Department of Pediatric Neurology and a nurse will discuss them with you.

### Special Needs

If your child has any special needs or health issues you feel the doctor or assistant performing the test needs to know about, please call the Division of Neurology at Children's Hospital of Pittsburgh **before** the test and ask to speak with a nurse. It is important to notify us in advance about any special needs.

Division of Pediatric Neurology  
**Children's Hospital of Pittsburgh of UPMC**  
One Children's Hospital Drive  
4401 Penn Ave.  
Pittsburgh, PA 15224  
412-692-5520

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To see the list of all available patient procedures descriptions, please visit [www.chp.edu/procedures](http://www.chp.edu/procedures).

