Physical Medicine: EMG (Electromyogram) and NCV (Nerve Conduction Velocity)

An EMG (electromyogram) shows changes in the electrical activity of the muscles. Electrical activity is normal. It helps the muscles move.

An NCV (nerve conduction velocity) exam tests the health of the nerves that are outside of the brain and spinal cord.

For Outpatient Use Only

Child’s name:__________________  Date:__________  Time:__________

• Come to your child’s appointment 20 minutes early for registration.
• Go to the Admitting Office in the main lobby. It’s to the right behind the Welcome Desk.
• You will get a pass and directions to the EMG lab on H10A. Take the elevators to the EMG lab. When you get off the elevator, turn left at the large wooden turtle. Enter through the glass doors by swiping your pass.
• The waiting area will be on your right. Wait for a nurse to take you to the EMG lab.

How to Prepare for the Test

Explain how the test is done to your child in a way they can understand.

What your child can eat or drink before their test depends on if they will be getting medicine (sedation) to make them sleepy or relaxed during the test.
Diet WITH sedation

| 6 hours before | • Stop all coffee, tea, soda (pop), and chocolate.  
|               | • They can still have clear liquids. These are liquids you can see through that do not have pulp or food bits in them. Some examples are water, apple juice, white grape juice, and Pedialyte®. |
| 2 hours before | • Stop all clear liquids.  
|               | • They cannot eat or drink until after the test. |

Before Coming to the Hospital

- Tell the doctor or health care provider if your child has any allergies.
- If your child takes any medicine, bring a list of what they take with you.
- Try to keep your child awake before the test so they will be sleepy.
- If you have a baby, bring their formula, milk, or a clear liquid drink. Bring a pacifier if they use one.
- Your child may bring favorite blankets or toys. Older children may bring small electronic devices that have batteries and headphones.
- Have your child wear or bring loose-fitting shorts and a short-sleeved shirt. They will be more relaxed in their own clothes. We ask those born female to wear a tank top under the short-sleeved shirt.
- Your child’s skin should be clean. Don’t put lotion or cream on them.

Before the Test

- At the hospital, your child may be given some medicine by mouth to help relax them. The medicine will make your child sleepy for a few hours. They should lie down and not be left alone after they take the medicine, if sedated.
- You may stay with your child during the test if it helps them relax. Sometimes it may be better for parents to wait in the waiting room.
- Do not bring other children, like siblings, with you.
- Turn off cell phones before going into the EMG lab.
How the Test is Done

• Your child will lie on a table. Small stickers (electrodes) are placed on their legs and arms. They’re connected to the EMG machine with wires (Picture 1).

• There are 2 parts to the test: the NCV and the EMG. The doctor or health care provider will do the nerve conduction tests first. Your child may feel tingling during these tests.

• For the EMG test, the doctor or health care provider inserts a very thin wire into the muscle. This wire lets them see and hear the electrical activity. You and your child will also see and hear the response. Your child may feel discomfort during this test, but it should only last a few minutes.

• The length of time the tests take is different for each child. It usually takes 30 to 90 minutes.

After the Test

• Your child may return to their normal activity and diet.

• The test results will be sent to the doctor or health care provider who ordered them. They will explain the results to you. If you want the results sent to a different doctor, give us their name and address before you leave.

• If you have any questions or you can’t keep the appointment, call the Nationwide Children’s Hospital EMG Lab at (614) 722-5051 or (614) 722-5055.