

# Electromyogram (EMG)

## What Is an Electromyogram (EMG) Test?

An electromyogram (EMG) can include two different tests that use electrodes to track electrical activity within muscles and nerves. There are two types of electrodes that can be used, depending on the test—flat metal discs or very small needles.

The EMG procedure is very low-risk, and complications from an EMG are rare. There's a small chance of bleeding or infection in areas where needle electrodes are used.

## Who Benefits from an EMG?

EMG test results can help to diagnose or rule out disorders of the muscles or nerves. An EMG might help if your child experiences symptoms such as:

- Numbness.
- Tingling.
- Paralysis.
- Muscle twitching.
- Muscle weakness.
- Muscle pain or cramping.

## Preparing for Your Visit

To prepare your child for an EMG study, follow these basic steps.

- Make sure their skin is clean and dry. Don't let them use lotion before the EMG.
- Have your child wear both shoes (not sandals) and socks for warmth, even if it's hot outside. This step is important for testing.
- Bring along a pair of shorts and a short-sleeved shirt to change into for the exam.
- Have your child eat, drink, and take medicines as usual before and after the study.

## What to Expect During an EMG

An EMG usually consists of two parts: the nerve conduction study and the direct measurement of electrical activity in the muscle. We might provide medicine or nitrous oxide to help your child feel more comfortable during the test.

## Nerve Conduction Study

If we perform a nerve conduction test, we attach flat metal disc electrodes to the skin with tape. We place these recording electrodes over muscles controlled by a nerve. Next, we place a nerve stimulator over the nerve. The stimulator sends mild and brief electrical shocks to the nerve, causing a tingling sensation.

Our equipment records the size and speed of the electrical responses. An EMG nerve study typically takes 15 to 60 minutes. Sometimes it takes longer, depending on the number of muscles and nerves we study.

## Electromyogram

For this part, we ask your child to lie on a bed or in a reclined position that lets their muscles relax. Next, we clean the skin above the muscle we need to study. Then we insert the EMG electrode. The EMG electrode is a very small needle or wire that goes into the muscles and attaches to a recording machine.

During this portion of the test, your child doesn't receive any electrical pulses. We ask them to slowly tighten different muscles, sometimes in a certain sequence. Once the electrode is in place, we record muscle activity one muscle at a time—both when the muscle is at rest, and when your child tightens the muscle.

The EMG machine converts the muscle's activity into sounds—typically a popping or snapping sound. An EMG might take 30 to 60 minutes.

## After an EMG

After the EMG, a specially trained electromyographer interprets the EMG. Results might not be available right away. We send EMG test results to the referring provider, who discusses these results with you.

## Integrated Care

You can trust the experience of our technicians, who specialize in a variety of [neurodiagnostic tests](#), including electromyograms. Our electromyographers are familiar with the nerve and muscle conditions that affect children most often, and how EMGs performed on children differ from EMGs performed on adults.

If your child has a disability, they might require neurodiagnostic services designed specifically for their needs.

Through every part of your child's journey, we offer support and services to help make the process as comfortable as possible. For example, our child-friendly atmosphere and [Child Life](#) specialists are available to offer positive distractions, such as games and toys, during a procedure.

For more information, see [Preparing for Your Visit](#).

[Make An Appointment](#) [651-290-8707](#)

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](#).