

Visited 04/09/2015

Search  Submit[Symptoms](#) | [Doctors](#) | [Health Care Reform](#)

HEALTH A-Z

DRUGS &amp; SUPPLEMENTS

LIVING HEALTHY

FAMILY &amp; PREGNANCY

Article Link: <http://www.webmd.com/brain/electromyogram-emg-and-nerve-conduction-studies>

## Brain & Nervous System Health Center

### Tools & Resources

[Epilepsy: Causes, Treatments](#)[10 Tips to Beat MS Fatigue](#)[Visual Guide to Brain Stroke](#)[Medical Marijuana Uses](#)[What Is Spasticity?](#)[Alt Treatments for MS Symptoms](#)

Share this:

## Electromyogram (EMG) and Nerve Conduction Studies

An electromyogram (EMG) measures the electrical activity of muscles at rest and during contraction. [Nerve conduction studies](#) measure how well and how fast the nerves can send electrical signals.

Nerves control the muscles in the body with electrical signals called impulses. These impulses make the muscles react in specific ways. Nerve and muscle problems cause the muscles to react in abnormal ways.

If you have leg pain or numbness, you may have these tests to find out how much your nerves are being affected. These tests check how well your spinal nerves and the nerves in your arms and legs are working.

### Why It Is Done

An EMG is done to:

- Find diseases that damage muscle tissue, nerves, or the junctions between nerve and muscle. These problems may include a [herniated disc](#), [amyotrophic lateral sclerosis](#) (ALS), or [myasthenia gravis](#) (MG).
- Find the cause of weakness, paralysis, or muscle [twitching](#). Problems in a muscle, the nerves supplying a muscle, the spinal cord, or the area of the [brain](#) that controls a muscle can cause these symptoms. The EMG does not show [brain](#) or spinal cord diseases.

A [nerve conduction study](#) is done to:

- Find damage to the peripheral [nervous system](#), which includes all the nerves that lead away from the brain and spinal cord and the smaller nerves that branch out from those nerves. This test is often used to help find nerve problems such as [carpal tunnel syndrome](#) or Guillain-Barré syndrome.

1|2|3|4|5 [NEXT PAGE >](#)

Visited 04/09/2015

WebMD Medical Reference from Healthwise



Last Updated: March 12, 2014

*This information is not intended to replace the advice of a doctor. Healthwise disclaims any liability for the decisions you make based on this information.*

© 1995-2014 Healthwise, Incorporated. Healthwise, Healthwise for every health decision, and the Healthwise logo are trademarks of Healthwise, Incorporated.

### Further Reading:

[Slideshow: A Visual Guide to Concussions and Brain Injuries](#)

[What is Bell's palsy?](#)

[How Brain Function Differs in Men and Women](#)

[Epley Maneuver for Vertigo](#)

[Semont Maneuver for Vertigo](#)

[Michael J. Fox: Health Hero](#)

[Brain Diseases](#)

[See All Brain and Nervous System Research and Studies Topics](#)

### Top Picks

[Chain Restaurants Cutting Calories](#)

[6 Symptoms You Shouldn't Ignore](#)

[Muscle Spasms, Cramps, and Charley Horse: Causes and Treatments](#)

[Causes of Tingling in Hands and Feet](#)

[Slideshow: What Your Hair & Scalp Say About Your Health](#)

[Video: Adult Braces](#)