

Electromyography (EMG)

At UW Medicine Sports Medicine Center

This handout explains the electromyography and nerve conduction studies that are done at the UW Medicine Sports Medicine Center at Husky Stadium.

What is electromyography?

Electromyography (EMG) is a test that checks the health of your muscles and the nerves (*motor neurons*) that control them. An EMG can show if there are problems with your nerves, in your muscles, or with how your nerves send signals to your muscles.

Motor neurons send electrical signals to the muscles to make them move. An EMG picks up these signals and creates a graph, sounds, or values that your doctor can read.

At UW Medicine Sports Medicine Center, a *nerve conduction study (NCS)* is done at the same time as the EMG. An NCS checks how well the nerves in your arms and legs work, including the *sensory* nerves (nerves that pick up pain signals and send them to the brain).

EMG and NCS are diagnostic tests, not a treatment. They will give you and your provider more information about the cause of your symptoms.



An EMG is done using an instrument called an electromyograph.

How do the tests work?

- An **NCS** uses *surface electrodes* (small patches placed directly on your skin) to send or receive electrical signals. The doctor will place the electrodes on your skin in the area where you have symptoms. You will feel a tiny electrical current from the electrodes. This may feel like a small twinge or spasm.

- An **EMG** uses *needle electrodes* about the size of acupuncture needles to record nerve impulses to your muscles. These needle electrodes do not send electrical impulses. You may have some minor, short-term bruising where the needle electrodes were inserted. This bruising is normal and should fade within a couple of days.
- Together, the NCS and EMG take 60 to 90 minutes.

Who should have these tests?

You may want to have these tests if you have tingling, numbness, or muscle weakness. Talk with your primary care provider at your next office visit about having an EMG.

Is there anyone who should not have these tests?

These tests may need to be adapted if you:

- Have a pacemaker
- Are taking blood-thinning (*anticoagulant*) medicine
- Have *hemophilia* (a disease that keeps blood from clotting)

Are these tests covered by insurance?

Most health insurance policies cover EMG and NCS. Talk with your insurance agent to find out for sure.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

UW Medicine Sports
Medicine Center: Call
206.598.DAWG (3294) and
press 8.