



Nerve conduction velocity

Nerve conduction velocity (NCV) is a test to see how fast electrical signals move through a nerve.

How the Test is Performed

Patches called surface electrodes are placed on the skin over nerves at various locations. Each patch gives off a very mild electrical impulse, which stimulates the nerve.

The nerve's resulting electrical activity is recorded by the other electrodes. The distance between electrodes and the time it takes for electrical impulses to travel between electrodes are used to determine the speed of the nerve signals.

How to Prepare for the Test

Normal body temperature must be maintained (low body temperature slows nerve conduction).

Tell your doctor if you have a cardiac defibrillator or pacemaker, as precautions may need to be taken.

How the Test Will Feel

The impulse may feel like an electric shock. Depending on how strong the stimulus is, you will feel it to varying degrees, and it may be uncomfortable. You should feel no pain once the test is finished.

Often, the nerve conduction test is followed by electromyography (EMG), which involves needles being placed into the muscle and you contracting that muscle. This can be uncomfortable during the test, and you may have muscle soreness after the test at the site of the needles.

Why the Test is Performed

This test is used to diagnose nerve damage or destruction. Occasionally, the test may be used to evaluate diseases of nerve or muscle.

What Abnormal Results Mean

Most often, abnormal results are due to some sort of nerve damage or destruction