ICPR - FAMILY PRACTICE

Nerve Conduction Velocity Test (NCV)

A nerve conduction velocity test (NCV) is an electrical test that is used to determine the adequacy of the conduction of the nerve impulse as it courses down a nerve. This test is used to detect signs of nerve injury.

In this test, the nerve is electrically stimulated, and the impulse is measured. This is usually done with surface electrodes that are placed on the skin over the nerve at various locations. The distance between electrodes and the time it takes for electrical impulses to travel between electrodes are used to calculate the speed (velocity) of impulse transmission. A decreased speed of transmission indicates nerve disease.

When is an NCV test used?

Symptoms that might prompt a health care professional to order an NCV test include numbness, tingling, and/or burning sensations. The NCV test can be used to detect true nerve disorders (such as diabetic neuropathy) or conditions whereby nerves are affected by mechanical compression injury (such as carpal tunnel syndrome and diseases of the spine).

Follow-up

Often NCVs are used to follow the progression of the neurological disease. For example, with **Diabetic Peripheral Neuropathy (DPN)**, the recommendation of the American Diabetes Association is for patients to be screened annually, at minimum, to follow the progression of the diseased nerves and the effectiveness of treatment.

What an NCV Test Feels Like

During your NCV test, the electrical impulses may feel like little electric shocks. The good news is that these sensations only last as long as the impulses themselves. Once the test is over, there will not be any lasting discomfort.

How to Prepare for NCV Testing

Because the NCV test uses electrodes on the skin, you don't need to do much to prepare for it. You should wait to apply any lotions or creams to the area being tested until after the procedure. Also, if you have a pacemaker or cardiac defibrillator, make sure to tell your practitioner so they can take the necessary precautions before the NCV test begins.