

EMG & NERVE CONDUCTION VELOCITY (NCV) STUDIES

What Are EMG Studies?

Electrodiagnostic studies are used to study nerves and muscles and are helpful in evaluating weakness, numbness, pain, and symptoms such as fatigue, cramps and abnormal sensation. They include the needle electromyography (EMG) examination, nerve conduction velocity (NCV) studies, and evoked potentials.

During an EMG, the electromyographer Dr. Mousad analyzes the electrical activity of muscles by inserting a fine needle electrode into selected muscles. Needle insertion may cause mild temporary discomfort. The needle is not used for injection and no shocks are given. By doing this he can determine whether the muscle or the nerve going to the muscle is/are working normally or not by seeing the electrical activity on a screen and listening to the sounds of the activity of the speaker. The needles are discarded after each patient to prevent transmission of infections.

To perform nerve conduction velocity studies (NCV), Dr. Mousad tapes small electrodes on the skin, applies a brief electric stimulus to one portion of a nerve, and records the response to the stimulus at a different place along the nerve. Nerve stimulation will cause a slight tingling sensation. The physician can then evaluate the electrical response of the nerve or muscle to which the nerve is attached and determine if the nerve impulse is (a) conducted normally, (b) at a slow speed, or (c) not transmitted at all, suggesting damage to a nerve.

Preparation For Electrodiagnostics/NCV Studies

You do not need to do anything special to prepare for the electrodiagnostic study except keep your skin free of any lotions or emollients on the day of the study. There are no restrictions relative to activities before the test.

Time Required

The time required to complete an electrodiagnostic study varies, but generally takes approximately 60 – 90 minutes.