**Premier Neurology and Wellness Center**

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**Nerve Conduction Study and EMG**

**Background:**

Electrodiagnostic testing includes a range of specialized tests, including nerve conduction studies (NCS) and needle electromyography (EMG), that are used to evaluate the peripheral nervous system. This test is an extension of the physical examination, to provide sufficient and valuable information to establish a diagnosis of neuromuscular dysfunction of the peripheral nervous system or muscle disease. The information these tests provide will allow physicians to create a treatment plan that addresses a patient’s specific symptoms.

**Why is the Test Performed?**

Numbness, tingling, pain, muscle wasting or weakness in the body are the most common indications for the study. Typical conditions that require a nerve conduction study are: Spinal disc herniation, carpal tunnel syndrome, ulnar nerve neuropathy, peroneal neuropathy, tarsal tunnel syndrome, polyneuropathy due to diabetes and other metabolic and autoimmune conditions as well.

**How is the Test Performed?**

For this test, a series of surface electrodes are placed at different locations along specific peripheral nerves. The nerve is stimulated at one site and recorded at a different site to determine if the nerve is conducting appropriately. Each electrical stimulation is recorded as a waveform on a computer and analyzed by the neurologist.

The second portion of the test is used to assess both nerve and muscle functions. A small-diameter concentric needle is placed into a muscle to evaluate insertional activity, resting activity, voluntary recruitment, morphology, and size of motor units, as well as motor unit recruitment.

**Test Preparation:**

The study is very short in duration. The patient generally will be ready to go home immediately following the test. Dress attire should be short sleeve tops and bottoms. Absolutely **NO BODY LOTIONS OR OILS.**

**EMG and NCV: Discomfort and Risks**

* EMG: You may feel discomfort when the needle electrodes are inserted.
* NCV: You may feel startled when the electrical pulses are generated.
* After EMG: The muscle(s) tested may feel sore, and you may have minor bleeding or bruising where the needle electrodes were inserted.
* EMG risk: Small risk of infection where the needle electrodes were inserted.

**Patient Name:­­­­­­­­­­­­­­­­** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Date:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­\_­­­

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