

## Electromyography (EMG) Institute

### MONITORING YOUR NERVES AND MUSCLES



#### **Head Of Institute:**

Dr. Alon Frenman

Physical Medicine & Rehabilitation

### **What is Electromyography?**

Electromyography (EMG) is a test that measures the electrical impulses of the muscles at rest and when contracted. It is used to determine the cause of weakness, paralysis, involuntary muscle twitching or other symptoms by diagnosing diseases or injuries in the muscle and peripheral nervous system - their location, type and severity.

### **The EMG Institute**

Laniado Hospital's EMG Institute performs two tests that measure the electro-physiological activity in the nerves or muscles, making it possible to see their level of physiological activity. A person may be referred for one or both of these tests, which are performed by a specially-trained and experienced neurologist. The tests are carried out with advanced equipment, in a comfortable setting, with personalized care given to every patient.

- **Nerve conduction tests ( NCT)**

Electromyography is usually done in conjunction with nerve conduction tests (NCT) tests - also called Nerve Conduction Velocity (NCV) tests - which measure how well individual nerves transmit electrical signals to the muscles. Disposable surface patch electrodes are placed on the skin over the nerve at various locations. One electrode stimulates the nerve with a very mild electrical impulse. The 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 calculate the speed of impulse transmission (nerve conduction velocity). The result is recorded on the monitor. This test makes it possible to diagnose carpal tunnel syndrome (Carpal Tunnel Syndrome - CTS), Diabetic Neuropathy, Cervical or Lumbar Radiculopathy) as well as other disorders of the peripheral nerve.

Not every nerve can be examined. For example, nerve roots that are connected to the spinal cord can not be directly tested due to their location. Furthermore, since the test evaluates large-diameter nerve fibers, there may neuropathy affecting small-diameter nerves, which is not revealed during the testing. This is one of a series of neurological tests.

**Preparing for the examination:**

You must advise your doctor if you have a pacemaker. In such a case, the test will be performed on an area that is not near the heart.

- **Electromyography** Electromyography, which tests the electrical activity of muscles, is used to determine the cause of weakness, paralysis, involuntary muscle twitching or other symptoms. Testing makes it possible to ascertain peripheral nerve injury and to diagnose congenital or acquired muscular diseases such as myositis or myopathy, as well as nerve - muscle" diseases such as myasthenia gravis or amyotrophy.

Very thin disposable needles are inserted into the muscles at several points. The patient is asked to contract and relax his muscles.

**Preparing for the examination:**

- You must advise your doctor if you have had bleeding problems or are taking medication, especially blood-thinning drugs such as Sintrom, Coumadin, Plavix or aspirin.
- Do not use creams or body lotions on day of the examination.
- Wear loose-fitting clothing.

**You must bring to your examinations:**

- A detailed letter from your referring physician
  
- A commitment from Kupat Holim (Form 17) or cash payment for the hospital fee
- Previous EMG / NC test results, if any
- If you have a pacemaker, an authorization by your primary physician that the examination may be performed

**Health Funds**

The hospital works with Meuhedet, Maccabi and Leumit health funds.

**Make an appointment**

phone: 972-9-8609336

**Department Location**

Children's Hospital building - ground floor

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