

**Department of  
Physical Medicine and Rehabilitation**

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**Service Hours**

Monday to Friday: 9:00 am - 5:00 pm  
Saturday: 9:00 am - 1:00 pm  
Closed on Sundays and Public Holidays  
Consultation by Appointment



# Nerve Conduction Studies and Needle Electromyography



For enquiries and appointments,  
please contact us

## What is Electrodiagnostic Testing?

Electrodiagnostic testing is an extension of neurological examination. It can help evaluate the causes of numbness, muscle weakness and pain. There are two common types of electrodiagnostic testing for the evaluation of nerves and muscles, namely nerve conduction studies and needle electromyography. These tests can provide information vital to the diagnosis, prognosis and planning for treatment. The examination typically lasts for 30-60 minutes, or sometimes longer for more complex conditions.

## Nerve Conduction Studies (NCS)

According to your medical history and symptoms, electrodes are placed on appropriate areas on your skin. A small electric current is delivered repeatedly to stimulate the motor and sensory nerves in different parts of your body. Data are then collected and analysed by the computer, and a specialist in electrodiagnostic medicine can interpret the results, and make a diagnosis of the possible causes, locations and severity of nerve or muscle diseases.

## Needle Electromyography (EMG)

Needle EMG provides information about the integrity of muscles and nerves. A sterilised fine needle is inserted into the targeted muscles so as to record the electrical activities. You may experience mild pain, yet the needle EMG causes no adverse effect on your health.

## How to Prepare for the Examination?

1. Wear warm but loose-fitting clothes to keep your body and limbs warm.
2. Take a shower and keep your skin dry before the examination. Do not use any skin moisturiser after shower.
3. Notify your doctor or medical personnel before examination if you have a pacemaker or are taking blood thinners.
4. In case of examination of the upper limbs, remove all accessories, such as rings, watches or bracelets.
5. If you experience any discomfort during the examination, notify your doctor or medical personnel immediately.
6. The report will be sent to the referring doctor's office. Your referring doctor will explain to you in detail about the findings during the upcoming follow-up consultation.