

TEST: Nerve Conduction Study +/- Electromyography (NCS/EMG)

NCS Test Information

**** Please note: This test needs to be conducted in hospital if the patient has a pacemaker.**

The doctor will need to know a history of the complaint (usually briefly outlined in the referral).

NCS (Nerve Conduction Studies) are used to assess the peripheral (arms, hands, legs and feet) nerve function and to determine a neurological cause for muscle weakness and sensory loss in these areas. This is most commonly used to confirm diagnosis of Carpal Tunnel Syndrome, but can be used to investigate other complaints.

The test involves placing electrodes on specific muscles on the arm or leg, which will record an applied stimulus to the nerve.

- The applied stimulus is a short, electric stimulation of the nerves.
- This may cause some minimal discomfort, but is over quickly. The sensation is likened to a “TENS” machine used to electrically stimulate the muscles, often used by Physiotherapists or Chiropractors.

The purpose of this test is to determine how “fast” and effectively the nerve is propagating the stimulus to the muscle.

EMG Test Information

EMG (Electromyography) is used in association with NCS (Nerve Conduction Studies) to determine a neurological cause for muscle weakness.

EMG involves the placement of a small needle into the muscle to record the electrical activity of that muscle. While the needle is inserted, the patient will be asked to “flex” and “relax” the muscle.

- Usually, a few muscles will be tested in this manner.

The test generally takes one hour to complete if two limbs require testing.

- Please ensure easy access to the limb(s) in question. If legs are to be tested, please wear shorts or a skirt.