



Nerve Conduction (NCS) & Electromyography (EMG) Studies

WHAT ARE NERVE CONDUCTION AND EMG STUDIES?

Purpose: nerve conduction studies are safe, non-invasive tests that measure how well and how fast electrical signals travel through your motor and sensory nerves. EMG studies look at the electrical activity produced by your muscles.

WHY IT IS DONE?

Nerve conduction studies diagnose conditions causing pain, numbness, tingling, pins and needles (like carpal tunnel syndrome or peripheral neuropathy), or muscle weakness. They can determine the extent of nerve damage or dysfunction. They can be used to monitor recovery and to check if certain medications or medical conditions (such as diabetes) are affecting the nerves. EMG studies are used to diagnose muscle disorders, nerve compression syndromes and other disorders such as motor neuron disease.

WHAT TO EXPECT DURING YOUR TEST



ELECTRODES

Small, sticky dots (electrodes) are placed along the nerve pathway. One delivers a small signal, the other detects the response.



THE SENSATION

A mild electrical pulse creates a quick tapping or tingling feeling. It is generally painless, though mild discomfort is normal.



EMG COMPONENT

If an EMG is required, a fine pin is briefly placed in the muscle to record its electrical activity.



DURATION

Tests typically take 15–60 minutes, depending on how many nerves are assessed.



AFTERWARDS

You can return to normal activities straight away, including driving.

WHAT YOU NEED TO DO TO PREPARE

- **Skin Care:** Do NOT apply any moisturisers, lotions, or body creams on the day of the test (these block the electrical signals).
- **Jewellery:** Do NOT wear any jewellery or metal accessories, as these must be removed before the test begins.
- **Clothing:** Wear loose, comfortable clothing that allows easy access to your arms and legs.
- **Temperature:** Try to keep warm before your appointment, as cold hands and feet can affect the accuracy of the nerve readings.
- **Medication & Food:** You do not need to fast. You can take all your usual regular medications.
- **Medical Devices:** If you have a pacemaker or other internal cardiac device, please inform the clinic before your appointment.
- **Driving:** You can immediately return to driving after the test.

YOUR RESULTS

- The test results will be analysed by your specialist.
- The results may show where along the nerve pathway the problem is and if the problem is mainly due to the nerve itself (axon) or the coating around the nerve (myelin).
- Sometimes, the nerve conduction study will not show what the problem is, and further tests may be needed.
- A formal report will be sent directly to your referring doctor within approximately one week.
- A follow-up appointment with your doctor may be required to discuss what the results mean for your treatment plan.

Questions or Concerns? Our friendly team at Persistent Pain Solutions is happy to help. Please get in touch using the details below.

GET IN TOUCH WITH PERSISTENT PAIN SOLUTIONS

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