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design by Medical Illustration

## Information for patients Nerve conduction studies (NCS) and electromyogram (EMG)



## Neurology



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## Why would I need nerve conduction studies(NCS) and electromyogram (EMG)?

Nerve conduction studies (NCS) and electromyogram (EMG) tests are performed in a variety of circumstances. They are most commonly used to test patients who complain of pins and needles, tingling, numbness, pain or weakness in their arms or legs. Nerve conduction studies and electromyogram tests are two separate tests. The nerve conduction studies are done first, and then based on the results the consultant neurophysiologist will decide whether you need electromyogram tests following this. Most patients do not require both tests as the nerve conduction study provides sufficient information. If you do need an electromyogram, then it will be done during your appointment.

## What is a nerve conduction study?

It is a test that measures how fast electrical pulses travel along nerves in the body. During the NCS, the consultant will place small tab electrodes on the skin of the hands or legs. The nerve/s will then be stimulated with a handheld stimulator device that sends electrical pulses through the skin and feels very similar to the pulses of a TENS machine. The pulses are brief and can cause mild tingling/discomfort or brief muscle twitches. Most patients can tolerate the test without problems, but a few may find it uncomfortable and request not to continue with the testing. The entire test usually takes about 10-15 minutes.

## Possible unpleasant side effects of NCS include:

- Pain at/around the site of the electrical stimulation
- Muscle twitching
- Involuntary movement of the limb
- Superficial skin marking/bruising under the electrical stimulator device

## What is an electromyogram?

It is a test to assess the level of function of a muscle. In electromyography, a fine needle is inserted into a muscle to analyse its activity. Nothing will be injected into your body and no blood will be taken.

## Possible unpleasant side effects of an EMG include:

- Pain
- Bleeding
- Bruising
- Infection
- Nerve injury

## Preparation for the tests:

It will help you be better prepared if you read this information sheet prior to your appointment. At the start of the test, you will be asked some questions about your medical history (mainly about your symptoms and medication). You will also have a chance to ask any questions that you may have. You do not need to fast or stop any medication prior to the test. Please let us know if you have a pacemaker, haemophilia or are on anti-coagulant therapy (warfarin/heparin/apixaban). Please refrain from applying body lotion on the limbs that need to be tested and wear loose clothes that can be easily rolled up to the arms and knees.

## Who will be undertaking the tests?

The NCS and EMG tests will be undertaken by Consultant Neurophysiologist. If you would like the consultation to be chaperoned, please let the consultant know at the start of the consultation.

## When will I get the results from the test?

The consultant neurophysiologist will not be able to tell you the results straight after the test as he will need to analyse the data. After completion of the analysis a letter will be sent to the referring consultant who will then be in touch with you to discuss your results.

## What if I am worried about the test?

If there are any parts of the test that you feel uncomfortable with then you should tell the consultant neurophysiologist or referring clinician who can discuss any concerns with you.

If you have any concerns regarding your appointment, please contact the secretary on **01691 404574**.

If you need to change your appointment, please contact the booking coordinator on **01691 664860**.