

Recording nerve and muscle activity with a nerve conduction study (NCS)/ electromyography (EMG) (adults & children)

Clinical Neurophysiology

Information for Patients

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Your/your child's consultant has asked us to do a NCS / EMG. This sheet tells you what an NCS / EMG is and what you need to know before you come for the appointment.

What is a NCS / EMG investigation?

- A nerve conduction study (NCS) measures the speed that impulses travel along nerves in the body.
- Electromyography (EMG) records the electrical impulses from muscles in the body.

Together, they can show how well the nerves and muscles are working. They are used to diagnose nerve and muscle disorders. You/your child may have either an NCS or EMG, or both.

You/your child will be seen by a physiologist and/or a consultant on the day.

What do I need to do before the NCS / EMG?

- Please bring a list of current medication and take these as normal
- Wear loose, comfortable clothing as we may need to examine above the knee or elbow
- Please remove any wrist and excess finger jewellery
- You/your child may eat and drink as normal
- Please do not apply any body lotions, oils or hand creams before the appointment

**Health information and support is available at www.nhs.uk
or call 111 for non-emergency medical advice**

Visit www.leicestershospitals.nhs.uk for maps and information about visiting Leicester's Hospitals
To give feedback about this information sheet, contact InformationForPatients@uhl-tr.nhs.uk

Important: If you/your child have a pacemaker or internal defibrillator fitted please tell the consultant/physiologist on the day.

Please also make them aware if you/your child are taking any blood thinning medication (for example, aspirin/warfarin) as this may affect whether the EMG can be done.

What will happen during an NCS / EMG?

- You/your child will be brought into the clinic room by the physiologist or consultant.
- They will ask a series of questions to get a detailed history of symptoms.
- The hands may also be warmed if they are too cold as this can affect the results.
- Ring and button electrodes will be placed on certain areas of the body to deliver a series of electrical pulses (stimuli). This will feel like a repetitive tapping / tingling sensation.
- Small marks may also be made on the arms / legs where the electrodes are placed. These will be measured with a tape measure.
- For the EMG, the consultant will insert a very fine needle into certain muscles. You/your child will be asked to relax and tense the muscle so it can be tested in both states.
- The activity will be displayed on a screen. There will be a crackling sound coming from the speakers too. This may be repeated in several different muscles.
- Please allow up to 2 hours for your NCS/EMG to be done.

Will there be any discomfort?

The tapping sensation can feel a little uncomfortable but the impulse is short lasting. It may also feel a little sharp when the needle is inserted but once it is in place there should not be any discomfort. If anything is too painful, please tell the consultant/physiologist.

When will I get the results?

You will not get the results on the day of the NCS/EMG.

Your/your child's consultant will be sent a report which they will then discuss with you.

Anything else I need to know?

Please let us know if you will be arriving by ambulance, we may need to rearrange the appointment.

If you have any questions before you come for the appointment, please call the Neurophysiology Department on 0116 258 5621.

