University Hospitals of Leicester

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

	Produced:	July 2024
Clinical Neurophysiology	Updated:	July 2024
	Review:	July 2027
	Leaflet number: 1515 Version: 1.1	

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 are 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.

Trusted Information Creator
Patient Information Forum

EICESTER'S

Space for any notes/questions

اگر آپ کو یہ معلومات کسـی اور زبان میں درکار ہیں، تو براہِ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔ علی هذه المعلومات بلغةٍ أُخری، الرجاء الاتصال علی رقم الهاتف الذي يظهر في الأسـفل જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ `ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ। Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email equality@uhl-tr.nhs.uk

Leicester's Hospitals is a research active trust so you may find research happening on your ward or in your clinic. To find out about the benefits of research and become involved yourself, speak to your clinician or nurse, call 0116 258 8351 or visit www.leicestersresearch.nhs.uk/ patient-and-public-involvement