

Patient information factsheet

Nerve conduction study and electromyogram (EMG)

We have given you this factsheet because you are due to have a nerve conduction study and electromyogram. It explains what a nerve conduction study and EMG are, how to prepare for the tests and what to expect during the tests. We hope it will answer any questions you may have. If you have any further questions, please contact a member of the team using the details at the end of this factsheet.

Your doctor has referred you to the neurophysiology team to have this test. Your appointment letter will also give you details of your appointment date and other useful information.

Please contact us immediately to let us know if:

- you have a cardiac (heart) pacemaker or an implanted cardiac defibrillator
- you take anticoagulant medication (blood thinning or anti-platelet medication) such as:
 - Warfarin
 - Dabigatran
 - Apixaban
 - Rivaroxaban
 - Clopidogrel
 - Dipyridamole

If you have a cardiac pacemaker or an implanted cardiac defibrillator, we will check with the cardiology team that it is safe for you to have nerve conduction studies.

If you are taking the above medications, it may not be advisable for you to have the EMG part of the test. We may ask you to stop taking this medication temporarily before you have the test. We may ask you to contact your GP or your specialist doctor about this.

What is a nerve conduction study?

A nerve conduction study measures how your nerves respond to small electrical pulses. If there is a problem with your nerves (such as being trapped, damaged or diseased) then these measurements may be abnormal and may help us to assess and diagnose the problem.

What is an EMG?

An EMG uses a fine needle to record the naturally-occurring electrical activity within your muscles.

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On the day of your appointment

On the day of your appointment, **you should:**

- keep your hands and feet warm, especially in cold weather (nerves conduct messages more slowly when cooled, so this could affect the results of your test)
- wear loose, comfortable clothing
- tell the doctor or physiologist if you are taking anticoagulant medication (blood thinning or anti-platelet medication such as Warfarin, Apixaban, Dabigatran, Rivaroxaban, Clopidogrel or Dipyridamole)
- tell the doctor or physiologist if you have a cardiac pacemaker or an implanted cardiac defibrillator

You should not:

- wear jewellery on your arms or legs (wedding rings can be left on)
- use any cream or moisturising lotion on your skin (these can interfere with the recording)

Please ensure you arrive on time. If you arrive late we may need to rebook your appointment

If you would like a chaperone to be present during the test, please inform the staff at reception when you arrive.

During the test

To obtain measurements of your nerve impulses, a recording electrode will be placed on your skin, usually on your upper and/or lower limbs. Another electrode will be used to stimulate the nerve. The stimulator produces small electrical pulses that feel like a sharp, tapping sensation.

The process will be repeated for a number of different nerves. Although the test can be uncomfortable and some people experience a slight increase in their usual symptoms for a few minutes afterwards, the test will not cause you any harm.

Following a nerve conduction study, an EMG test may also need to be performed.

If an EMG is required, a fine needle will be inserted into the muscle to view and listen to the electrical activity. You may be asked to move in a certain way in order to contract the muscle. The small size of the needle means it should not be too uncomfortable.

Allow at least one hour for the test, although in most cases it takes no longer than 30 to 45 minutes.

You may experience some minor bruising and soreness for a short time after the test. In rare cases, bleeding into the muscle might occur. Please ask a member of staff if you would like more information about this or any aspect of the test.

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Results

The specialist physiologist or doctor performing your test will not be able to give you a result immediately. The results need to be analysed, and a full medical report will be sent to the doctor who referred you for the test.

Contact us

Please contact the department if there is any information you do not understand.

If your appointment is not convenient, please contact the department as soon as possible to rearrange it.

Clinical neurophysiology department

Telephone: **023 8120 6785** (between 8am and 4.30pm, or please leave a message on the answer machine).

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