

Neurophysiology department

# Your nerve conduction studies/electromyography tests

## Information for patients, relatives and carers

This leaflet explains what nerve conduction studies (NCS) and electromyography tests (EMG) are and how to prepare for them. We hope it answers any questions you or those who care for you may have. This leaflet does not replace the discussion between you and your care team but aims to help you understand more about what is discussed. If there is anything that you do not understand please ask your care team.

### What is an NCS and an EMG?

An **NCS** examines the electrical function of the nerves in your arms and/or legs using surface sticky pads.

An **EMG** test examines the electrical activity produced by your muscles using a small recording needle.

Both tests might feel slightly uncomfortable but should not feel painful. Depending on your symptoms, you may need to have one or both of the tests on your arms and/or legs, and sometimes facial muscles.

Each test can last between 30 and 45 minutes, depending on the number of nerves/muscles that needs to be tested.

### Before the test

- Please tell the department if you have an implanted cardiac defibrillator (ICD) as we will not be able to perform the study
- Please tell the department if you have a pacemaker or any other implanted devices, as this may interfere with the recording. Please bring information about the device with you to your appointment

### On the day of your test

**Please arrive on time for your appointment. If you are running late, please call us on the appropriate number listed on page 3, otherwise we may have to cancel or reschedule your test.**

- Continue to take your medication as normal
- You can eat and drink as normal
- Please bring a list of your current medication with you to the appointment
- Please do not use any moisturiser or body lotions on your skin as this can interfere with the recording

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- Please wear loose clothing such as trousers and a top which you can roll up. If the clothing is not appropriate for the test, we may ask you to remove parts of it or wear a hospital gown

## During the appointment

- When you arrive at your appointment you will be called in by the clinical physiologist/consultant neurophysiologist who will explain the test, answer any questions you have and ask you to sign a consent form
- We will ask you about your medical history and to see the list of your current medication, including any blood-thinning medication such as Warfarin.
- The temperature of your hands and/or legs will be taken. If they are not warm enough, we will ask you to sit with your hands/feet in warm water for a few minutes.
- **The NCS:** your clinical physiologist or a consultant neurophysiologist will attach small surface pads on your arms and/or legs. The nerves will be stimulated using small electrical impulses which can feel like a pulsing sensation and can make your muscles twitch slightly
- **The EMG test:** a consultant neurophysiologist will insert a small, fine needle into your muscles. This will feel like a pinprick and may cause a small amount of bleeding. The recording is taken while the muscle is relaxed and tensed
- Once the test is completed, the pads/needles will be removed and the area will be gently cleaned
- The results will be analysed and a report will be sent to your consultant within three weeks

## Risk or complications following the test

- There are no known side effects to having an NCS
- After an EMG test, there is a small chance of localised bruising. Your muscles might feel sore for a short time after the test. If you are concerned or the symptoms continue please contact your GP

## Contact us

If you cannot make your test or have any questions or concerns about your appointment please contact the relevant neurophysiology department:

- St Marys Hospital: **020 3312 6628**
- Charing Cross Hospital: **020 3311 1329 / 7515**

We are open Monday–Friday, 09.00–17.00.

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## How do I comment on my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3313 0088** (Charing Cross, Hammersmith and Queen Charlotte's & Chelsea hospitals), or **020 3312 7777** (St Mary's and Western Eye hospitals). You can also email PALS at [imperial.pals@nhs.net](mailto:imperial.pals@nhs.net) The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street  
London W2 1NY

Email: [ICHC-tr.Complaints@nhs.net](mailto:ICHC-tr.Complaints@nhs.net)

Telephone: **020 3312 1337 / 1349**

## Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or alternative languages. Please email the communications team:

[imperial.communications@nhs.net](mailto:imperial.communications@nhs.net)

## Wi-fi

Wi-fi is available at our Trust. For more information visit our website: [www.imperial.nhs.uk](http://www.imperial.nhs.uk)