University Hospitals of Leicester
NHS Trust

Having electrophysiology tests for your eyes

Department of Medical Physics

Information for Patients

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Introduction

This leaflet will tell you what you need to know before coming to your visual electrophysiology appointment. It is important that you read through this information carefully before the day of your appointment. On the day, we will explain everything to you before the tests start and the person doing the test will be happy to answer any questions you may have.

What are visual electrophysiology tests?

Electrophysiology tests involve recording tiny electrical responses that are produced by the eyes and the brain when you look at flashing lights or moving patterns. The results can tell us if you have a problem with your eyes, with the nerves that connect your eyes to your brain, or the part of your brain linked to vision.

What are the benefits of having this test?

Electrophysiology tests can be useful in diagnosing particular conditions, the location of the problem and how bad it is. They can also be used to check your level of vision.

How do visual electrophysiology tests work?

When you look at something, your eye sends tiny electrical signals to the back of your brain. The brain makes these into a picture and we understand this as sight or vision. During the tests we put small sensors on your head or around your eyes to measure these signals. This gives us information about how well your eyes are working, which we can pass onto the eye doctor who referred you.

A short video is available online which, although aimed at children, gives a good description of some of the tests we do: https://youtu.be/I1WxLDTUKW0

There are various types of visual electrophysiology tests but you may not need to have them all. This will depend on which tests your doctor has referred you for.

Having eye drops during your test

Ticked here if you will need to have this: ☐

For most of the tests, you will need to have eye drops to make the black part of your eye (pupil) larger (dilate) so it can let in lots of light. This can make your eyesight blurred which can last up to 6 to 8 hours, so please don't drive until this has worn off. You may also wish to bring sunglasses as it can seem bright for some time after the test.

Please tell us on the day (or by phone before your appointment) if you may be allergic to any eye drops, if you have ever had a bad reaction to eye drops, or if you may be pregnant.

If you wear contact lenses, you may not be able to put them back in for a few hours after your test.

What are the different tests?

The tests you will be having during your appointment are ticked below, with some detail about what each one involves:

☐ Visual evoked potential (VEP):

This tests the pathway between the eye and the vision area at the back of the brain. We will place some sticky sensors on your head, then using one eye at a time, ask you to look at some patterns on a screen and then some flashing lights.

☐ Electroretinogram (ERG):

This tests the retina at the back of the eye. This is done by placing 3 stickers on your face, and a very thin thread (thinner than a hair) across the front of your eye. You will then be asked to look at some flashing lights in the dark, and then in the light.

☐ Pattern electroretinogram (PERG):

This measures the responses from the very central part of your retina (the macula). This test is done the same way as the ERG test, but you will be in the light looking at a pattern on a screen.

☐ Multifocal ERG (mfERG):

This test makes a map of how well each part of your retina is working. It is done in the same way as the PERG test but with a different pattern.

☐ Electrooculogram (EOG):

This test records your eye movements in the dark and in the light, to test a layer within the retina. We will place 3 stickers on your face and a sticky sensor will be placed either side of your nose, close to your eyes. You will follow a light from side to side with your eyes, first in the dark and then repeated again in the light.

How do I prepare for the appointment?

- If you normally wear glasses to read or for everyday use please bring them with you.
- If you wear contact lenses you may need to take them out for some tests. If we use eye drops for your tests, you may not be able to put them back in for a few hours.
- If you have a copy of your glasses prescription, please bring it with you.
- Please make sure your hair is clean and that you have not used any greasy/ oily styling products.
- Please do not wear make-up on your face, or moisturiser or facial oils, on the day.
- We do not have a cafe in the Sandringham Building so it's best to bring any drinks or snacks you may need. For longer tests, tea/ coffee and biscuits can be provided if needed.
- For patients who meet eligible criteria, a patient transport service is available if you need transport to and from your appointment. This service is provided by EMED Patient Care. To make a booking contact the service on 0300 777 1800, or arrange this through your GP, at least 3 or 4 days before your appointment.
- **If you suffer from epilepsy please let staff know before the start of your test and/ or by phone before your appointment.**

How will I get the results?

The results of your tests will be checked after you have left. A report will go to your eye doctor, so you will get the results when you return to your eye clinic. We will not be able to give you any results at the time of your appointment with us.

If you do not receive an appointment letter to return to see your eye doctor when expected, please call our booking centre on 0300 303 1563. If you feel that your eyes are getting worse before you receive a follow-up appointment, you should contact your GP, your local optometrist, or if urgent you can contact/ attend the Eye Casualty Department.

Contact details

Please let us know immediately on the number below if you are unable to attend your appointment. If you fail to attend without informing us, you will not automatically be given another appointment.

For any queries or further information please do not hesitate to contact us on:

0116 258 5685

Visual Electrophysiology Service, Department of Medical Physics

Sandringham Building, Leicester Royal Infirmary LE1 5WW

For a copy of this leaflet in large print call 0116 258 5685

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہِ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔

على هذه المعلومات بلغةٍ أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل

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।

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