

Multifocal electroretinography (mfERG)

Purpose of the study

Multifocal electroretinography (mfERG) records electrical activity in the retinal cone cells of the eye.

Preparing for the study

- Take your time to read this information leaflet. Measurements from the retinal cone cells of the eyes will be recorded using electrodes that resemble hard contact lenses. Sign the consent form and give it to the technician when you arrive.
- Your pupils will be dilated for the study. This will impair your vision for about six hours afterwards, so you will not be able to drive during that time. Bring sunglasses with you, as your eyes may feel sensitive to bright daylight after the study.
- Wash your face before you come in for the study. Please do not put on any make up (especially eye makeup) or skin cream.

The course of the study

Eye drops are used (Oftan Tropicamid®) to dilate your pupils. Next, the skin of the forehead is cleaned and a sensor pad attached. Anaesthetic drops (Oftan Obucain®) will be applied to numb the corneas of your eyes. A recording electrode that resembles a hard contact lens, moistened with Celluvisc® eye drops, will be placed on the surface of the eye.

Both eyes are tested separately. You are asked to look at a flashing pattern while seated in a chair. The pattern will stimulate the retina of your eye, causing small, measurable responses. The study is safe and will not harm the eye. The contact lens electrode may feel somewhat unpleasant. The study takes about one hour.

After the study

The effect of the anaesthetic drops lasts about two hours, during which time rubbing the eyes should be avoided. Slight redness and watery eyes is possible after the study. However, if your eyes become very red and there is severe pain, contact your local health centre.

A specialist in clinical neurophysiology will prepare a report on the study. The ward or outpatient clinic that ordered the study will tell you about the results and possible further actions.

Consent to the use of recording electrodes in the mfERG study

(This form is meant to be printed out and has blanks to be filled in.)

The recording electrodes used for multifocal electroretinography (mfERG) at Turku University Hospital (Tyks) are like hard contact lenses that are placed on the eyes.

The contact lens electrodes (Burian-Allen electrodes) come with holders to keep the eyelid in place. The same recording electrodes are used in the United States and are approved for patient use there. In addition, they have been used in Finland both at the Helsinki Institute of Occupational Health for eye examinations for several years and in Tyks Clinical Neurophysiology since autumn 2019. There have been no problems using the sensors.

As the sensors are not CE approved, the Finnish Medicines Agency (Fimea) requires that the patient be informed prior to the examination. As the manufacturer is not responsible for the use of the product in the EU, this responsibility for the use of the sensors lies with the Department of Clinical Neurophysiology in Tyks.

Please sign this form and bring it with you to the examination.

I have reviewed this leaflet about my eye examination using multifocal electroretinography (mfERG). I give my informed consent for the recording electrodes described above to be used in the study.

Name and personal identity code

Signature

Date and place
