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Contact Heat Evoked Potentials (CHEPs)

This leaflet is designed to give you some information about the investigation for which you have been referred. Your doctor may have already explained what CHEPs involve, but you will probably still have some questions.

If after reading this leaflet you have any fears, queries or concerns, please do not hesitate to contact our staff before your appointment. You will also have the opportunity to discuss any of these issues on the day of the appointment prior to the start of the investigation.

WHAT IS A CHEP?

A CHEP is a routine investigation performed on all age groups of patients. It records the electrical response of the brain to short heat stimuli applied to the skin. The responses are detected using small disposable discs that are loosely attached to the scalp. These investigations are usually carried out to diagnose disorders of the peripheral nerves, spinal cord or brain.

ON THE DAY OF THE INVESTIGATION

Please report 15 minutes before your appointment to the reception. It is often helpful if you wear loose fitting clothes for the examination as this will reduce the need for undressing. If your arms are examined we usually need to get access up to your elbows. If your legs need to be examined, you will be asked to take off your shoes and socks, tights or stockings and we need to get access up to your knee.

THE PROCEDURE OF THE INVESTIGATION

Throughout the investigation you will be seated in an armchair or lie in a bed. The investigation will be carried out by a physician or clinical physiologist and will take approximately 30 minutes. We shall explain every step of the procedure as it progresses. Although some patients find the studies a little uncomfortable, they should not cause too much pain. If, however, you find any procedure too unpleasant or if you need a rest let us know immediately. Any discomfort or pain will generally disappear within seconds once we stop the procedure.

Thermal threshold testing

Initially we need to test your thermal sensitivity. For this we attach to your skin a metal probe which gently changes its temperature. You will be asked to press a switch when you feel a cool or warm sensation or a painful cold or heat. The temperature reverse to normal once you press the button and you are therefore not exposed to any persistent pain.



CHEP recording

We shall place a few small discs onto your head. These are held in place with a sticky, water-soluble paste that can be easily removed after the investigation. For the detection of good responses, the skin first has to be rubbed with some gritty paste. During this part of the procedure the clinical physiologist may ask you questions about your symptoms and medical history



Please inform the clinical physiologist, if you have any allergies to latex or plaster tape before the procedure.

Once the discs are in place the brain activity in response to thermal stimuli will be recorded. We will apply 10 to 20 short (a fraction of a second) heat or cold stimuli to your arm, leg or face. These stimuli are intended to be slightly painful but are generally well tolerated. They do not cause any harm to the skin other than a slight reddening in very sensitive individuals.

AFTER THE INVESTIGATION

When the investigation is complete, the discs are removed. CHEPs do not have any persistent side effects other than occasional mild reddening of the skin that goes away after a short while. You will be able to return to your normal activities immediately after the investigation although there may be some small amount of paste left in your hair, which will wash away with shampoo.

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