

Magnetic Evoked Potentials (MEPs)

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 MEPs 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 ARE MAGNETIC EVOKED POTENTIALS (MEPs)?

MEPs are a routine investigation performed on all age groups of patients. It records the response of muscles to magnetic stimulation of the brain or the peripheral nerves as they exit the spinal column. The responses are detected using small disposable discs that are placed on skin overlying the muscle. These investigations are usually carried out to diagnose disorders of the peripheral nerves, spinal cord or brain.

BEFORE THE INVESTIGATION

You might have received a questionnaire. It is essential that you return it as soon as possible. MEPs may not be recorded, if

- you have a cardiac pacemaker or an implanted cardioverter or defibrillator.
- you have any other implanted medical device other than artificial joints.
- you have foreign metal parts in your body other than dental implants, gold inlays or amalgam fillings.

ON THE DAY OF THE INVESTIGATION

Please be on time and report 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 elbow. 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.

Some skin moisturisers and creams can interfere with the investigation and it is best to avoid them on the day.

THE PROCEDURE OF THE INVESTIGATION

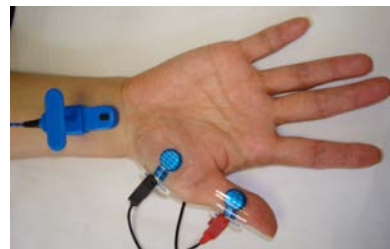
The investigation will be carried out by a physician or physiologist and takes approximately 15 to 30 minutes. The staff will explain every step of the procedure as it progresses. Although some patients find the studies a little uncomfortable, they should not cause too much pain. If, however, you find 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. The staff may ask you questions about your symptoms and medical history and may also perform a short focused physical examination. Depending on the problem, the staff will decide whether upper or lower limbs or both will be studied. Generally both sides of the body will be studied. Before we start the investigation you need to remove any credit or access cards with magnetic stripes from your pocket as they may be erased during the investigation.

You will be comfortably placed on a chair or a couch. Magnetic pulses will be applied to the brain or the back by a device (see picture) which will provoke short twitches of parts of the body. The reactions are recorded by small adhesive disks that are attached to the skin overlying muscles and which can be easily removed afterwards.



It is also often necessary to apply small electrical pulses to peripheral nerves in the arm or the leg which activate the same muscles that we are studying with magnetic stimulation.



AFTER THE INVESTIGATION

When the investigation is complete, the discs are removed. Magnetic or electrical stimulation of the brain and nerves do not have any persistent side effects. You will be able to return to your normal activities immediately after the investigation.

RESULTS OF THE INVESTIGATION

The results of the test will be sent to the referring consultant within a couple of days, but the physician performing the investigation will already be able to give you preliminary results. However, it is usually not appropriate for him or her to discuss the findings with you in any great detail because the interpretation may depend on the results of other tests to which we often do not have access at the time of the neurophysiological recordings. It is generally therefore best that the results of the neurophysiological investigation are also discussed with your consultant.