

Technologist and the Researcher, who will also ensure your comfort, will constantly monitor you.

HOW LONG WILL IT TAKE?

The scans that we perform generally last approximately 1-2 hours in total. The first twenty minutes or so will be spent setting-up the equipment and making sure that you are in a comfortable position in the scanner chair/bed.

The actual scanning session lasts up to one hour during which you will not feel anything, the best thing to do is just relax.

ARE THERE ANY POSITIVE ASPECTS FOR VOLUNTEERS UNDERGOING MEG?

When you volunteer to have an MEG scan you leave with the knowledge that the experience has contributed to furthering the progress of medical and psychological research.

We will give you a unique 'mug' and an anatomical image of your brain as a token of our thanks. Your Researcher will also send you a picture illustrating the typical brain activity, which occurred during the task you carried out for the experiment



UCL INSTITUTE OF NEUROLOGY

Leopold Müller Functional Imaging Laboratory

Welcome Trust Centre for Neuroimaging, 12 Queen Square, London WC1N 3BG

0203 448 4362

www.fil.ion.ucl.ac.uk



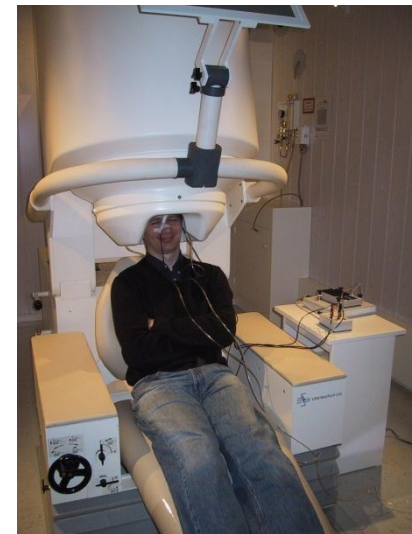
UCL INSTITUTE OF NEUROLOGY

WELLCOME TRUST CENTRE FOR
NEUROIMAGING

LEOPOLD MÜLLER FUNCTIONAL IMAGING
LABORATORY

www.fil.ion.ucl.ac.uk

MEG INFORMATION



Hello!

Thank you for your interest. This leaflet will help you with some of the practical considerations involved in a MEG scan. We have a CTF Omega 275 MEG scanner of which there are very few in this country.

WHAT IS MEG?

M.E.G. is an acronym for MagnetoEncephalography. This is a technique, which enables us to examine the function of the brain by using a MEG scanner and analysing the information obtained.

MEG is a non-invasive neurophysiological technique that measures the magnetic fields generated by neuronal activity of the brain.

Because magnetic fields pass through the skull and scalp as if they were transparent, they can be measured outside of the head using the MEG scanner. The magnetic field is extremely small but can be detected by sophisticated sensors that are based on superconductivity. MEG produces an “activity map” or “functional image” of your brain. There are no side effects and it doesn't hurt

WHEN IS MEG USED?

MEG scans can provide different types of information such as:

- What activity is the brain producing and where in the brain does it come from? For example, it can be used to measure brain activity

associated with relaxation, migraine and epilepsy

- Which part of the brain undertakes different tasks/ For example, MEG can determine exactly which part of your brain controls actions such as speaking or moving arms and legs
- How does the brain work? MEG researchers are working to further understand the way in which the brain functions both normally, and when something goes wrong

HOW DOES MEG CONTRIBUTE TO MEDICAL RESEARCH?

MEG is shedding light on some of the fundamental workings of the human brain. Studies that involve normal volunteers form the basis of this and are a vital part of our research program. Through such work, we are learning about normal brain function in areas such as language, vision, movement, memory, thought and emotion.

THE WELLCOME DEPARTMENT

The Wellcome Trust Centre for Neuroimaging is funded by the Wellcome Trust and Leopold Muller Trust and consists of researchers who try to understand how the brain generates different types of behaviour and then relate them to the disturbed behaviour caused by different kinds of illnesses. All of the research that goes on contributes to a growing ‘*data-base*’

about brain function and brain activity, so that our understanding is progressing more and more.

WHO CANNOT HAVE A MEG SCAN?

Anyone who has a cardiac pacemaker, metallic implants in the upper half of their body or a history of metal entering the eye will not be suitable for an MEG study. This is because the metal will cause interference to the MEG signal that is recorded. If you have any form of tattooing it would be best to let us know when you are being recruited.

WHAT WILL I HAVE TO DO?

Each scanning session will be part of a specific study relating to speech, language, emotion, vision, memory or problem-solving. The Researcher will explain in detail exactly what tasks you will have to carry out whilst being scanned. Most of the tasks are very simple, such as looking at pictures, thinking about what you are viewing, moving fingers etc. Images may be presented on a screen within the scanner or you may have a switch to indicate responses to a verbal instruction.

We can acquire up to six scans in a scanning session, during which you are asked to keep your head as still as possible, this is easiest if you relax. The scans can last from five to thirty minutes. All that we need you to do is to keep still and perform the task to the best of your ability. During the study a