MEG Research Study

What to Expect?
The MEG (magnetoencephalography) procedure consists of sitting in a chair or lying on a bed after your head has been placed in a helmet-shaped device. The helmet contains sensors that detect weak magnetic fields produced by brain activity. It is a completely non-invasive process that does not use strong magnets, radioactivity, or injected contrast agents. MEG is very similar to EEG (electroencephalography) and they are often done in combination. Both are completely passive (do not require you to do anything) and are considered minimal risk.

How Long Does It Take?
Testing may take up to 2-3 hours, depending on the number of procedures you are undergoing. Your contact person will provide you with the best time estimate for your study.

De-metalizing
You will be asked to remove any metallic/magnetic objects before entering the magnetically shielded room. You will be provided a locker to store your belongings. If you have magnetic parts on your clothing that cannot be easily removed, staff will provide you with hospital scrubs to wear.

Avoid wearing mascara, eye liner and eye shadow before testing. Female subjects are asked to a wear sports bras or bras that do not have an underwire.

Eye Monitor Electrode Placement
Electrodes will be applied to your cheek to monitor eye movements. To do this, we will first clean the skin with alcohol and a slightly gritty skin cleanser. We will then place an electrode directly below the eye and another at the outer edge of the eye.

Head Coil Placement
Head localization coils will be taped in place to determine the position of your head in the helmet, and the amount of head movement. In order to do this, marks may be placed at the junction of the nose and near the ears.

Head Shape Measurement
In order to combine the MEG data with your MRI scan, measurements will be made of the shape of your head using a stylus and a pair of special goggles. The position of each electrode and head coil will also be measured.

The Magnetically Shielded Room
The magnetically shielded room is designed to shield out magnetic interference (cell phones, computers, etc.). You will be asked to remove your shoes before entering the room to avoid tracking in any magnetic dust. You will be seated in the MEG chair for optimum comfort, and then raised up into the helmet.
EEG Cap Procedure
Some studies use an EEG Electrode Cap System to record EEG and MEG simultaneously. NOTE: this will apply only if you are getting both MEG and EEG.

Your head will be measured, and then the EEG cap – with imbedded electrodes – will be placed over your head. Next your scalp will be cleaned by rubbing with a Q-tip which has been dipped in a slightly abrasive skin cleanser. Paste or gel will be applied to your head. When the system is ready, you will be seated in the magnetically shielded room so scanning can begin. After the scan, you will be provided with facilities to wash your hair.

Remember!

1. Wear non-metallic clothing that can be easily removed.  
2. Female subjects should wear a sports bra or a bra without an underwire.  
3. Do not wear ANY makeup.  
4. Get adequate sleep the night prior to testing.  
5. Bring a comb (your hair may need to be combed at the end of your session).  
6. If you need vision correction and have contact lenses, please wear those rather than glasses.  
7. Testing may take up to 2 to 3 hours; please plan your day accordingly.

If you are also scheduled for EEG:

1. Wash your hair 24 to 48 hours prior to your appointment; rinse your scalp well to remove any residue.  
2. Do not apply any sprays, gels, oil, or other products to the hair or scalp (this will help minimize setup time).  
3. When you leave, your hair may be slightly damp (we will clean your hair to remove residual cream). You may want to bring a warm hat.

If you are also scheduled for EMG or a Sensory Evoked Field:

1. Shower prior to your scheduled test.  
2. Do not apply any lotion or oil to the body part to be tested.
Directions to
MRN MEG Core Facility

1. MRN is located in Pete and Nancy Domenici Hall on UNM’s North Campus (north of UNM Hospital).
2. Follow the signs to the Mind Research Network Research Participant Parking.
3. Park in the spaces marked Reserved for Mind Research Network Subject Parking Only.
4. Please bring this form with you to your appointment and provide it to receptionist the when you check-in.
5. You will be given a parking permit for your vehicle.
6. Your contact person will meet you in the reception area and bring you to the MEG lab.

Date: ______________________________  Arrival Time: ______________________
Contact Person: _____________________  Contact Phone: _____________________

Thank you for your participation!