

## **Neuroscience M203/M263 MRI Study**

You are eligible for MRI scanning because you are an instructor or a student enrolled in the UCLA Neuroscience Course M203 or Biomed Course M263. Your participation in MRI scanning is voluntary and is **not a course requirement**. Participation will last 30 minutes, during which time you will receive an MRI scan of your brain. Please read the information below before deciding whether or not to participate.

The UCLA Office for the Protection of Research Subjects has reviewed plans for MRI scanning as part of Neuroscience M203/M263 and has determined that MRI scanning in this educational context does not constitute human research and therefore does not require their approval.

### **• PURPOSE OF THE MRI SCANNING OPPORTUNITY**

The goal is to provide students and instructors in Neuroscience M203 with the personal experience of having a brain MRI scan to study brain anatomy, functional activity and connectivity. If you participate, you will be provided with the data obtained during your MRI scanning session to use during laboratory sessions associated with the course. If you choose not to participate or are ineligible to participate (or if the quality of your own data is inadequate for the laboratory sessions), you will be provided with comparable data obtained from one of your instructors. At the end of the course, all students will be asked to provide feedback about whether getting an MRI scan and working with their own personal data was useful.

### **• PROCEDURES**

If you volunteer to participate, you will be asked to do the following things:

- 1) Read and sign a copy of this form.
- 2) Come to the UCLA Ahmanson-Lovelace Brain Mapping Center for an MRI scan. It will take about ten (10) minutes to verify screening prior to the scan and thirty (30) minutes to complete your brain scans.
- 3) Regarding the brain scanning sessions,
  - a. You will answer some questions to make sure you do not have any metal in your body.
  - b. The brain scans will include structural magnetic resonance imaging (sMRI), diffusion tensor imaging (DTI) and function magnetic resonance imaging (fMRI) sequences.
  - c. During the sMRI and DTI scans, you will be asked to lie still in the scanner.
  - d. During the fMRI scan, you will be asked to make movements with your right hand in response to changes in the room lighting.

- e. The scanning will take place on the 1.5T Sonata scanner at the Ahmanson-Lovelace Brain Mapping Building on the UCLA campus.

The MRI instrument uses principles of magnetism within atoms and produces radio waves to take pictures similar to X-rays, but without using X-rays or other ionizing radiation.

- **POTENTIAL RISKS AND DISCOMFORTS**

The potential risks or discomforts associated with MRI scans include anxiety from being in a tight, enclosed space. In addition, the sound of the MRI scanner can be quite loud; you will be given special ear plugs to minimize the noise—you must use them. You will be asked to keep your head very still during the scans. Special padding or medical foam may be used to help you keep your head still. Although most people find the brain imaging to be a comfortable procedure, some might become anxious or too uncomfortable. If that is the case, you can inform the staff and the procedure will be terminated upon request.

The magnetism of the MRI instrument attracts certain metals; therefore, people with these metals in them (specifically pacemakers, infusion pumps, aneurysm clips, metal prostheses, metal joints, rods, plates or other metal objects) will be excluded from participating. **You must not participate in scanning if you have any of these types of devices in your body.** A copy of the screening form used to identify potentially problematic implants is included with this form. In some instances, it may be possible to establish that some of these items are indeed safe for MRI scanning, but you would need to provide detailed medical information about the implant to Dr. Woods to establish safety before being scanned. You may be able to establish that an implant is unsafe privately by reviewing information on the website <http://www.mrisafety.com>. The "metal" in dental fillings is less susceptible to magnetic effects and is therefore allowed. You must also remove any external metal such as jewelry or piercings before being scanned. To maximize your privacy, you may prefer to simply decline to participate in if you have implants that you do not feel comfortable discussing with Dr. Narr or Dr. Woods or if you have jewelry or piercings that you are unwilling or unable to remove for the scan. However, Dr. Narr or Dr. Woods will be happy to review any safety concerns with you personally and privately at your request.

Though MRI is not known to pose any risks to an unborn fetus, it is possible that there are unknown or unforeseeable risks. Because of this, pregnant women are excluded from participation. To maximize your privacy, you may wish to simply decline to participate if you are pregnant or think you might be pregnant. Likewise, it is recommended that you simply withdraw from participation if you learn that you are pregnant or believe that you might have become pregnant before your scheduled MRI appointment. You will not be asked for a reason if you decline to participate prior to your being placed in the MRI scanner.

There may be risks of MRI scanning that are currently unforeseeable. In the studies performed so far, however, there have been no significant risks reported in animals or humans for similar exposures to MRI scanning.

The brain images obtained from participation cannot be used to screen for or to diagnose all kinds of medically significant brain abnormalities, and the images will not be medically reviewed for abnormalities. Consequently, you should not assume that the scan of your brain was normal if this ever becomes an issue in your future medical care. However, if an unsuspected anomaly that may be of potential medical significance is identified, Dr. Woods will discuss this with you and suggest options for medical follow-up, if needed. If your brain scan is abnormal, you will be given the option of working with a normal brain scan obtained from an instructor for coursework related laboratories.

You will be given a copy of your MRI data. Your name will not be associated with the data. Instead, a coded number will be assigned to you and used instead of your name. You are free to use the MRI data as you wish, but you should be aware that associating your name with your data (e.g., by posting your MRI scan on the internet) could reveal medical information about yourself and/or have unforeseen implications with regard to your future medical insurability even if the scan has no abnormalities recognized by you or by the investigators.

- **PARTICIPATION AND WITHDRAWAL**

Your participation is VOLUNTARY. If you choose not to participate, that will not affect your grade in the course. If you decide to participate, you are free to discontinue participation at any time without being required to provide any explanation.

<b>SIGNATURE</b>
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I have read the information provided above. I have been given an opportunity to ask questions and all of my questions have been answered to my satisfaction.

**BY SIGNING THIS FORM, I WILLINGLY AGREE TO PARTICIPATE IN MRI SCANNING.**

\_\_\_\_\_  
Name of Student or Instructor

\_\_\_\_\_  
Signature of Student or Instructor

\_\_\_\_\_  
Date

# MAGNETIC RESONANCE (MR) PROCEDURE SCREENING FORM FOR RESEARCH

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Name or Coded Study Number \_\_\_\_\_ Age \_\_\_\_\_ Height \_\_\_\_\_ Weight \_\_\_\_\_

Male  Female

1. Have you had prior surgery or an operation (e.g., arthroscopy, endoscopy, etc.) of any kind?  No  Yes  
If yes, please indicate the date and type of surgery:  
Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Type of surgery \_\_\_\_\_  
Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Type of surgery \_\_\_\_\_
2. Have you experienced any problem related to a previous MRI examination or MR procedure?  No  Yes  
If yes, please describe: \_\_\_\_\_
3. Have you had an injury to the eye involving a metallic object or fragment (e.g., metallic slivers, shavings, foreign body, etc.)?  No  Yes  
If yes, please describe: \_\_\_\_\_
4. Have you ever been injured by a metallic object or foreign body (e.g., BB, bullet, shrapnel, etc.)?  No  Yes  
If yes, please describe: \_\_\_\_\_
- ~~5. Are you currently taking or have you recently taken any medication or drug?  No  Yes  
If yes, please list: \_\_\_\_\_~~
- ~~6. Are you allergic to any medication?  No  Yes  
If yes, please list: \_\_\_\_\_~~
- ~~7. Do you have a history of asthma, allergic reaction, respiratory disease, or reaction to a contrast medium or dye used for an MRI, CT, or X-ray examination?  No  Yes~~
- ~~8. Do you have anemia or any disease(s) that affects your blood, a history of renal (kidney) disease, or seizures?  No  Yes  
If yes, please describe: \_\_\_\_\_~~

## For female subjects:

9. Are you pregnant or suspect that you are pregnant?  No  Yes
- ~~10. Are you currently breastfeeding?  No  Yes~~

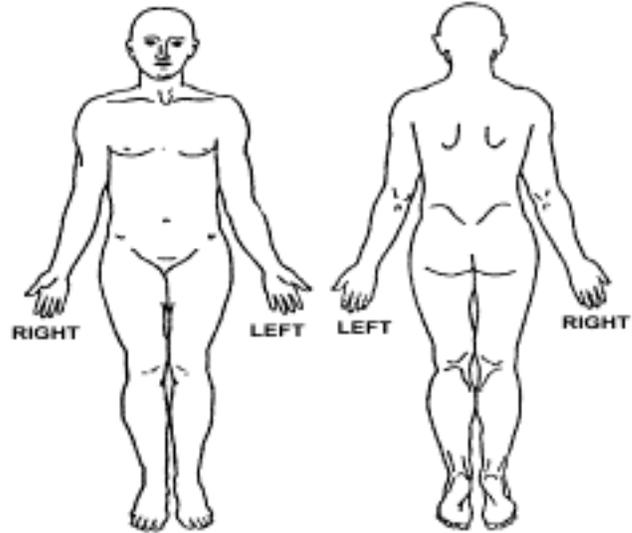


**WARNING:** Certain implants, devices, or objects may be hazardous to you and/or may interfere with the MR procedure (i.e., MRI, MR angiography, functional MRI, MR spectroscopy). **Do not enter** the MR system room or MR environment if you have any question or concern regarding an implant, device, or object. Consult the MRI Technologist or Researcher **BEFORE** entering the MR system room. **The MR system magnet is ALWAYS on.**

**Please indicate if you have any of the following:**

- Yes  No Aneurysm clip(s)
- Yes  No Cardiac pacemaker
- Yes  No Implanted cardioverter defibrillator (ICD)
- Yes  No Electronic implant or device
- Yes  No Magnetically-activated implant or device
- Yes  No Neurostimulation system
- Yes  No Spinal cord stimulator
- Yes  No Internal electrodes or wires
- Yes  No Bone growth/bone fusion stimulator
- Yes  No Cochlear, otologic, or other ear implant
- Yes  No Insulin or other infusion pump
- Yes  No Implanted drug infusion device
- Yes  No Any type of prosthesis (eye, penile, etc.)
- Yes  No Heart valve prosthesis
- Yes  No Eyelid spring or wire
- Yes  No Artificial or prosthetic limb
- Yes  No Metallic stent, filter, or coil
- Yes  No Shunt (spinal or intraventricular)
- Yes  No Vascular access port and/or catheter
- Yes  No Radiation seeds or implants
- Yes  No Swan-Ganz or thermodilution catheter
- Yes  No Medication patch (Nicotine, Nitroglycerine)
- Yes  No Any metallic fragment or foreign body
- Yes  No Wire mesh implant
- Yes  No Tissue expander (e.g., breast)
- Yes  No Surgical staples, clips, or metallic sutures
- Yes  No Joint replacement (hip, knee, etc.)
- Yes  No Bone/joint pin, screw, nail, wire, plate, etc.
- Yes  No IUD, diaphragm, or pessary
- Yes  No Dentures or partial plates
- Yes  No Tattoo or permanent makeup
- Yes  No Body piercing jewelry
- Yes  No Hearing aid  
(Remove before entering MR system room)
- Yes  No Other implant \_\_\_\_\_
- Yes  No Breathing problem or motion disorder
- Yes  No Claustrophobia

**Please mark on the figure(s) below the location of any implant or metal inside of or on your body.**



**! IMPORTANT INSTRUCTIONS**

**Before entering the MR environment or MR system room, you must remove all metallic objects including hearing aids, dentures, partial plates, keys, beeper, cell phone, eyeglasses, hair pins, barrettes, jewelry, body piercing jewelry, watch, safety pins, paperclips, money clip, credit cards, bank cards, magnetic strip cards, coins, pens, pocket knife, nail clipper, tools, clothing with metal fasteners, & clothing with metallic threads.**

**Please consult the MRI Technologist or Researcher if you have any question or concern BEFORE you enter the MR system room.**

**NOTE: You will be required to wear earplugs or other hearing protection during the MR procedure to prevent possible problems or hazards related to acoustic noise.**

Form Completed By:  Subject  Relative  Nurse \_\_\_\_\_  
Print name Relationship to subject

Form Information Reviewed By: \_\_\_\_\_  
Print name Signature

MRI Technologist  Researcher  Other \_\_\_\_\_