

The University Of Texas Magnetic Resonance Imaging Center (CPHS# HSC-MS-05-0516)  
Informed Consent for Research Study

*Functional Magnetic Resonance Imaging of Multisensory Integration & Multisensory Influences On Touch Perception--fMRI, MEG and TMS Studies & Rapid Sensory Processing in Well and Poorly Compensated Young Adults with Dyslexia*

Principal Investigator: Michael S. Beauchamp, Ph.D.

You are being invited to take part in a research project called, "Functional Magnetic Resonance Imaging of Multisensory Integration & Multisensory Influences On Touch Perception--fMRI, MEG and TMS Studies & Rapid Sensory Processing in Well and Poorly Compensated Young Adults with Dyslexia" conducted by Dr. Michael Beauchamp. Your decision to take part is voluntary and you may refuse to take part, or choose to stop taking part, at any time. A decision not to take part or to stop to take part being a part of the research project will not change the services that are available to you from UT Physicians or affect your future care. It will also not affect your grades or employment. You may refuse to answer any questions asked or written on any forms. This research project has been reviewed by the Committee for the Protection of Human Subjects (CPHS) of the University of Texas Health Science Center at Houston as Protocol Number: HSC-MS-05-0516. Dr. Beauchamp will be glad to answer any questions regarding the study at any time (713-500-5978).

Taking part in these studies may require one to three visits to perform different behavioral tests (such as to test reaction time and handedness) each lasting for about one hour. Some of these visits may include a test called functional magnetic resonance imaging (fMRI). Functional magnetic resonance imaging (fMRI) is performed in this study to help understand how the human brain processes information. Although of no direct clinical benefit to you, your taking part in this study should help us to better understand the brain regions involved in different types of mental abilities. If the visit includes MRI scanning, you will be asked to lie inside the MRI scanner for about two hours. During this time, several different kinds of MRI images of your brain will be collected. A high-resolution image of your brain will let us find detailed anatomical structures. Echo-planar images collected at a lower resolution will identify brain regions that are active as you see different pictures, hear sounds, or feel touch (tactile) stimuli. In some of the MRI scan sessions, we may be testing new scanning techniques and/or the use of new pieces of equipment. For example, in studies of emotional perception, we may wish to test the use of equipment to measure autonomic responses such as perspiration and heart rate; this is done by applying sensors to the fingertip. In studies of attention, we may wish to test the use of eye movement equipment; this is done by recording eye movements with a camera. On other occasions, we may measure your brain activity in other ways, such as magnetoencephalography (MEG), a magnetic brainwave test. For this test two small ear pieces will be placed in your ears, three small electrodes will be placed on your forehead and your head will be placed inside a large helmet style magnetic sensor. Recordings will be made while you are lying on your back or while sitting up. You will be asked to lie quietly on the exam table for no more than two hours.

Another technique that we may use is called transcranial magnetic stimulation (TMS). In this method, a coil will be placed near your head and used to create a magnetic field. This magnetic field will alter neural activity in a small portion of your brain for a few seconds. You may feel a small muscle twitch when the magnetic field is applied.

Your decision to take part is strictly voluntary and you may refuse to take part, or to stop being in the study at any time. No costs are involved to you, and you will be paid for your inconvenience. Because these are ongoing experiments, you may be asked to return for additional scan sessions but you do not have to. For your inconvenience, you will be paid \$10 for each behavioral experiment in which you take part, \$40 for each MRI session in which you participate, \$40 for each MEG scanning session in which you participate, and \$40 for each TMS experiment in which you participate.

Patients with cardiac pacemakers, intracranial aneurysm clips, or other implanted metallic devices CANNOT be included in this study. Welders and other metal workers may be at risk for eye injury because of small metal fragments in the eye, of which they might not be aware. Some patients may experience fear of closed spaces (claustrophobia) for a short time while in the MRI scanner. You will wear a set of ear plugs to reduce the noise and increase your comfort during scanning. If it is difficult for you to tolerate the confinement within the scanner or the noise you will be taken out immediately. None of the experiments in which you are taking part are invasive. It is possible that some very minor changes in your genes or molecules could be caused by the MRI scanner. At the present time, the risk of this is very low. Current experience shows that there are no risks or adverse effects from the magnetic fields used in this study. However, as a precaution, you should not take part in the study if you are or intend to become pregnant.

You will not be personally identified in any reports or publications that may result from this study. Any personal information about you that is gathered during this study will remain confidential to every extent of the law. A special number (or code) will be used to identify you in the study and only the investigator will know your name. No protected health information will be used or disclosed in the course of this study.

If you suffer any injury as a result of taking part in this research study, please understand that nothing has been arranged to provide free treatment of the injury or any other type of payment. However, all needed facilities, emergency treatment and professional services will be available to you, just as they are to the community in general. You should report any injury to Dr. Michael Beauchamp, at (713)500-5978 and to the Committee for the Protection of Human Subjects at (713) 500-7943. You will not give up any of your legal rights by signing this consent form.

Taking part in this study is your choice. If you sign this form it means that you wish to take part in this research study. Sign below only if you understand the information given to you about the research and choose to take part. Make sure that any questions have been answered and that you understand the study. If you have any questions or concerns about your rights as a research subject, call the Committee for the Protection of Human Subjects at (713)500-7943. If you decide to take part in this research study, a copy of this signed consent form will be given to you.

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Printed Name of Subject

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Individual Obtaining Consent

\_\_\_\_\_  
Signature of Individual Obtaining Consent

\_\_\_\_\_  
Date

This study (HSC-MS-05-0516) has been reviewed by the Committee for the Protection of Human Subjects (CPHS) of the University of Texas Health Science Center at Houston. For any questions about research subject's rights, or to report a research-related injury, call the CPHS at (713) 500-7943.