

More information about fMRI and what to expect

We are asking you to take part in a research study. This research study will test how ongoing brain activity occurring before the time that you see or hear something impacts how well you see or hear it, and how well you remember it. During the study, you may be presented with sounds and visual information, and we will monitor your eye movements and responses to questions about this information.

If you meet the eligibility criteria and decide to participate in the imaging study, we will have you meet with one of us to talk about the experiment and to fill out a brief Participant Information Sheet that asks things like whether you have any metal in your body. We will already have asked you by phone or email many of the study eligibility questions, but we will review your answers on this form with you. If you are female and of child-bearing age, you will have to take a urine-based pregnancy test prior to brain imaging to confirm that you are not pregnant. You will be escorted to a changing area, where you will change from your street clothes into comfortable loose fitting pants and shirt (scrubs). You will be asked to remove any jewelry, earrings or other body piercings and put them in a locked locker, along with your keys, cell phone, or other valuables you may have brought with you.

You will be asked to lie down on a bed in the scanner room, and a “head coil” will be placed over your head. The head coil looks something like a helmet, and has spaces for your eyes to look out. Extra padding will be placed around your head and body to make you comfortable, and you will have a sheet or blanket on top of you, as if being tucked in for sleep. You will wear earphones that help dampen the loud intermittent sounds that the magnet makes when it collects brain images. We will also use these earphones to talk with you over an intercom system. During most of the time in the magnet, you will be asked to remain still. For some of the time in the magnet, you will perform a task using sounds and/or pictures and you will respond to these stimuli by pressing a button. In effect, you will be playing a very simple video game while lying still inside the scanner. We will be tracking your eye movements while you play this game. The eye tracker uses dim infrared light to video where your eyes are looking. At some times, you will be asked to look at particular points on the screen in order to calibrate the eye tracker. Your time in the magnet will be between 60-120 minutes.

After the imaging session is over, the pictures of your brain will be sent to a physician who will review them for any abnormal findings. Most abnormal findings are just minor individual differences people have in their brains, like the difference between an innie and an outie belly button. However, some might be serious and should be followed up medically. For this reason, if our physician finds any abnormality, we will contact you using the information you provided us about how to reach you. If you request it and the physician found an abnormality, we will make a copy of the pictures of your brain available to your primary care provider. You will be responsible for following up on the information we provide you about any abnormal finding and for any associated costs. Note that this review of your brain pictures should not be considered a brain exam or a medical procedure, and is not a substitute for any medical care.

Exclusion criteria: We restrict the study to certain people for reasons of magnet safety and to reduce variability in the results we obtain. If you have a temporary illness, such as a cold, we

will be happy to reschedule your visit for when you are healthy. To be in this study, you must be between the ages of 19-35, or between 60-90 years old. You cannot be in this study if you are not in good health, not right handed, are pregnant or think you may be pregnant, had a previous serious head injury that could have affected your brain, have any metal in your body, are claustrophobic, are hearing impaired, are over 300 pounds, have a waist line of more than 60 inches, have a current or past history of a substance disorder, have hallucinations or delusions, are on any kind of psychoactive medication, or have trouble lying still for long periods. If you cannot see distant objects clearly without glasses, you can wear contact lenses, or the special magnet-compatible glasses we have in the scanner. If neither of these will work, you are ineligible for the study.