What is aphasia?

Aphasia is a condition in which individuals lose some or all of their ability to articulate ideas or comprehend spoken or written language, due to brain injury or disease.

What are we studying?

The purpose of our studies is to find the brain mechanisms that are affected when aphasic patients process language and whether language therapy can result in improvement. We will study participants with as well as without aphasia, to learn their differences. We will use MEG and MRI for the study.

What is MEG?

MEG, short for magnetoencephalography, is a non-invasive technique that measures the magnetic fields produced in the brain. MEG will be used to measure brain activity while you listen to or read sentences.

Sensors inside the MEG scanner record magnetic brains waves.

But, what is MRI?

Magnetic Resonance Imaging (MRI) is also a non-invasive method, commonly used in hospitals, that obtains images of the brain. MRI will help us determine the location of the brain activity that was measured with the MEG scanner.

MRI uses magnetic energy to produce cross-sectional pictures of any part of the body.

Are there any risks?

There are no known risks involved with the MEG or MRI scanning. You will not go home with an extra arm or a leg! Some people may feel cramped while lying inside the MEG machine, but we will try our best to make your experience as comfortable as possible. However, if at anytime, you do not wish to continue, we can stop and remove you from the scanner immediately. We will be watching you from a video camera at all times and you can call out for help at any point. There will be no penalty for withdrawing from the test.

How will the study take place?

1. You will sign a consent form and answer a questionnaire.
2. To create a computerized model of the brain, the dimensions of your head will be measured.
3. Before entering the MEG scanner, you will receive a short practice test on a desktop computer to become familiar with their task.
4. While in the MEG machine, you will view or listen to sentences displayed on a computer screen. And you will be asked to press a button indicating whether the sentences are correct or not.
5. Throughout this time, the MEG scanner will be recording magnetic fields that the brain produces.
6. On a different day, some of you will receive an MRI scan at the National Institutes of Health in Bethesda.

Are there any benefits?

Individuals will be paid $10 an hour for taking part in our study and students who are taking a course here on campus, may be given extra credit towards their final grade. (ex. HESP202).

On the testing day

Make sure you get plenty of sleep before the day of testing. Do not wear any metallic or magnetic clothing the day of testing. Females should wear a sports bra and no make up please! Any metal in these articles can affect the results of the test. Finally, contact lenses are preferred over glasses if you wear them.

Thank you for your interest in our studies! Please contact us if you have any questions or comments.

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Appointment Details:

Name:

Date:

Time:

Location:

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Welcome to the Aphasia Research Center

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