University of Wisconsin researchers are utilizing several different methods of neuroimaging, including perfusion MRI, and structural imaging to study the areas of the brain that are most often compromised early in the course of Alzheimer’s Disease. By combining new technology with other clinical information, we will gain a better understanding of the processes underlying the learning and memory problems in Alzheimer’s Disease. We hope this information will help us detect the disease earlier and provide a way to monitor brain changes associated with disease progression and treatment.
Study Description
The metabolic syndrome (MetS) is a cluster of cardiovascular risk factors that when present in middle-age is associated with an increased risk for AD. Although the exact mechanism by which MetS predisposes people to developing dementia is not known, vascular risk factors are well known to affect brain white matter. In this study we will look at how MetS interacts with other risk factors for AD like family history and genetic risk.

We will be using magnetic resonance imaging in healthy adults to see if structural or blood flow changes occur in people with certain risk factors for AD, such as MetS or family history. It may be that this research will eventually help diagnose AD earlier so that treatments can begin sooner. We are also interested in learning more about the mechanisms that underlie brain changes in people at risk, which will also aid in the development of new treatments.

What will I be asked to do?
Most participants will be asked to attend one visit that will take up to 2 hours. The visit includes questionnaires and an MRI. You will receive $50 for participating.

Is MRI Safe?
The MRI scan is safe. There are no injections, x-rays, or other forms of radiation. Some people who have metallic or electronic implants should not have an MRI because of certain risks. Please let us know if you have had any implants or metal-related injuries.

What if I Change My Mind?
Participation in this study is voluntary. You can stop participating at any time.

How Can I Receive More Information?
If you have further questions or would like to schedule a study visit, please contact the coordinator at (608) 256-1901 ext. 11418.

Wisconsin Alzheimer’s Disease Research Center

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Website: www.brainmap.wisc.edu

How is MRI used to study the brain?

MRI is a commonly used and relatively safe medical imaging tool. It can be used to assess whole brain volume in addition to the volume of specific brain regions. MRI is also used to assess blood flow in the brain while a person is resting or performing a task. MR scanners can also be used to perform “diffusion tensor imaging” which allows us to see how various parts of the brain are connected. The image above is an example of this type of imaging.

Who Can Participate?
We are currently recruiting:

• Volunteers who are at least 45 years of age with or without a family history of Alzheimer’s Disease

People with objects implanted in the body (e.g., stents, pacemakers, shrapnel) and people who are claustrophobic should not participate in this study. Also, women who are pregnant should not participate.