University of Wisconsin researchers are utilizing several methods of neuroimaging, including “functional” MRI, “perfusion” MRI, and PET to study the areas of the brain that are most often compromised early in the course of Alzheimer’s Disease. By combining this 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
Alzheimer’s disease (AD) likely begins its degenerative process several years prior to the onset of clinical symptoms such as memory loss. One of the features of AD is a buildup of amyloid plaques. Until recently, amyloid plaques could only be seen after death at autopsy. However, a new compound, Pittsburgh Compound B, has been developed to safely detect amyloid in living people. We will be using this imaging method in healthy adults to see if amyloid accumulates in people with certain risk factors for AD, such as family history. It may be that this research will eventually help diagnose AD earlier so that treatments can begin sooner.

Who Can Participate?
We are currently recruiting:
- Volunteers ages 50-85 with or without a family history of Alzheimer’s Disease
- Volunteers with a diagnosis of mild Alzheimer’s Disease

What Will I Be Asked to Do?
Participants will be asked to attend two visits within two weeks.
Visit 1 takes less than 3.5 hours and includes PET and MRI scans. Participants with Alzheimer’s disease will be asked to take a brief cognitive test (15 minutes).
Visit 2 will take 2 hours and includes another PET scan.
All participants will be compensated for their time and travel.

Is this Technology Safe?
PET imaging involves exposure to small amounts of ionizing radiation (the total for this study is approximately three times the amount of radiation you receive each year from living on this planet), but the dose is well below federal guidelines. The compounds have been tested to be safe to humans and clear rapidly from the body. Persons with MRI-incompatible devices or implants are not advised to undergo MRI.

What if I Change My Mind?
Participation in this research is entirely voluntary and you may discontinue at any time.

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