

Detecting Alzheimer's disease

Understanding the role of proteins in the brain

Did you know?

Research has discovered a person may have signs of Alzheimer's disease in their brain 10-20 years before noticing symptoms. When research participants complete certain brain scans or lumbar punctures, they help scientists understand how these signs of disease start, and more importantly, how to prevent them from progressing to symptoms.

Brain Proteins

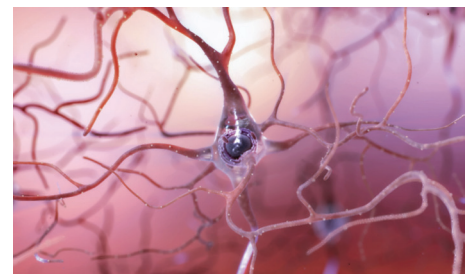
Scientists have learned more about the role of the brain proteins Amyloid and Tau. Everyone has small levels of these proteins. But if they accumulate, that can be a sign of Alzheimer's disease. This protein growth can only be detected from a special brain scan or a lumbar puncture.

Amyloid

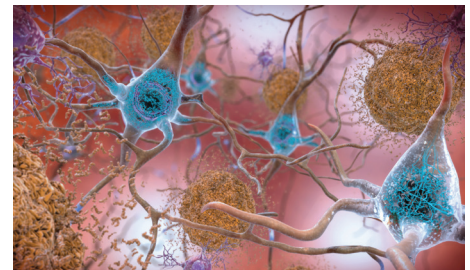
Amyloid clusters (called plaques) accumulate between brain cells and can disrupt cell function. Brain scans can detect these clusters years before symptoms develop. However, not everyone with amyloid plaques will develop symptoms; understanding the reasons why is a major goal of our research.

Tau

Tau proteins form in chains, called tangles, that collect inside brain cells. These cells are closely connected with memory loss. Alzheimer's disease is defined as having elevated amyloid plaques and tau tangles.

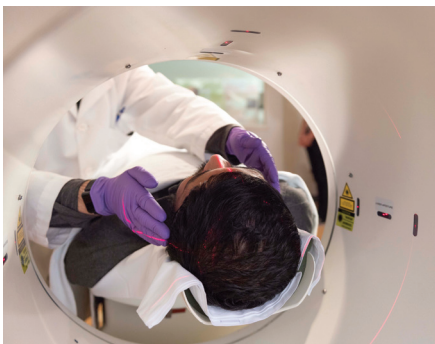


A healthy brain cell.



Amyloid (yellow) and tau (blue)

How we monitor brain proteins



PET Scan (includes MRI)



Lumbar puncture

What's next?

Soon, it could be possible to detect these proteins from a blood sample. We are seeking participants to explore this important possibility.

Participants make science possible
WRAP is recruiting participants to help us track these proteins in the brain, helping our researchers identify ways to prevent or even stop their growth.



**Wisconsin Registry
for Alzheimer's Prevention**
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Join our study!
1-800-417-4169
wrap@medicine.wisc.edu
wrap.wisc.edu