



# Detecting Problems in the Brain

If you sign up for an Alzheimer's clinical trial, here are some of the diagnostic technologies you might encounter.

## PET Scan

### Positron Emission Tomography

A safe, radioactive tracer is injected into the bloodstream. The tracer seeks out and binds to any plaques and tangles of the toxic proteins present in brains with Alzheimer's. Then, a special scan highlights these abnormalities. PET scans are sometimes used in the screening process for Alzheimer's clinical trials.

*Time: Up to 2 hours*



## MRI

### Magnetic Resonance Imaging

Instead of a radioactive tracer, this scan uses a strong magnetic field and computer-generated radio waves to create 3D anatomical images that can show brain atrophy. A functional MRI measures oxygen flow to the brain in order to analyze brain function during specific tasks.

*Time: Up to 2 hours*

## Lumbar Puncture

Cerebrospinal fluid is collected via a needle from the spinal cord. The fluid can then be used to detect and measure amyloid plaques and tau tangles in the brain.

*Time: 30 minutes*



## EEG

### Electroencephalogram

Electrodes placed on the scalp can detect and read the brain's electrical activity. Then, that data can be used to measure cognitive function.

*Time: Up to 2 hours*

## Blood Tests

Blood tests are currently being developed as a less invasive, quicker and more accessible way to measure Alzheimer's biomarkers, including amyloid and tau proteins, in the blood. So far, some blood tests are being used in Alzheimer's research, but they are still awaiting FDA approval.

*Time: 5 minutes*

