

Mayo Clinic News Network

Title: Mayo Clinic Minute: Seeing Alzheimer's in a new way Date: Nov. 30, 2016

Alzheimer’s disease is one of the most feared of all illnesses. Besides being the sixth leading cause of death, it’s the most common cause of dementia – often robbing people of their memories and dignity. But technology is now giving researchers new ways to find it sooner and, perhaps, zero in on much more effective ways to treat the condition.

One recent advance is the ability to see specific protein components forming in the brain with positron emission tomography, or PET scans. “If we look at Alzheimer’s disease from its basic definition, it is the presence of the neuritic plaque made of amyloid in the brain and the presence of the neurofibrillary tangle comprised of tau in the brain,” says Ronald Petersen, M.D., Ph.D., director of the Alzheimer’s Disease Research Center at Mayo Clinic.

“Now, we can see those two entities – the plaques and the tangles – in the living individual using some of our new imaging techniques,” Dr. Petersen says. How does it work? Here’s Dennis Douda for the Mayo Clinic News Network.

Video

Audio

Total running time [0:59]	/// VIDEO]
Dennis Douda speaking	Ann Miller was diagnosed with Alzheimer’s disease three years ago. Hoping her medical journey might somehow help others, she volunteered for a study on aging.
TITLE: Ronald Petersen, M.D., Ph.D Alzheimer’s Disease Research Center Mayo Clinic	“We formerly could only make the diagnosis definitively at the time of autopsy. We look at the brain under the microscope. We stain it. We see plaques. We see tangles.”
Dennis Douda speaking	However, advances in radiology have changed that. PET imaging is a special type of scan that makes a radioactive dye glow. The dye concentrates around the compounds it targets, like these telltale deposits of amyloid plaque in the brain.
Dr. Ronald Petersen speaking	“The other major feature of the disease, of course, is the neurofibrillary tangle comprised of tau.”
Dennis Douda speaking	A different dye makes tau glow this blue-green color during Ann’s PET scan. Such tools might help diagnose Alzheimer’s before symptoms appear, and even test if new drugs can remove tau and amyloid from the brain.
Dr. Ronald Petersen speaking	“So I think that’s the underlying thought is that the earlier we intervene, the

	better we will be, and, perhaps, we can even prevent the disease.”
Dennis Douda speaking	For the Mayo Clinic News Network, I’m Dennis Douda.

Anchor tag: November is national Alzheimer’s Disease Awareness Month. Nearly 5.5 million Americans are believed to be living with Alzheimer’s. Unless major medical advances are made for treating or preventing it, that number is expected to triple by the year 2050.