

Scientists have been attempting for years to learn who may get Alzheimer's disease. If the condition could be identified before its worst signs appear, people might get at least temporary medical help. There is no cure for Alzheimer's, which steals people's ability to care for themselves. But treatment can slow its progress.

The most widely held belief about the cause of Alzheimer's is that a protein, beta-amyloid, builds up in patients' brains. Large amounts of this protein may destroy a person's ability to think.

Some scientists question whether beta-amyloid causes Alzheimer's disease. They think that the protein build-up may *result* from it. But most researchers say thick tangles or plaques of the protein are responsible for the condition. Plaques are unusual clusters, or groups, of proteins. The researchers say beta-amyloid destroys communication links in the brain.

Among older people, Alzheimer's is the most common form of dementia, the loss of abilities needed for normal life. Other mental conditions may seem like Alzheimer's. Those conditions need medical treatment that is different from treatment for Alzheimer's. A correct diagnosis, or identification, is important.

The best way to diagnose the disease has been a medical examination of the brain after a person dies. Doctors say methods to test the living have presented problems, like high costs for widespread use.

Public and medical demand for a better way has been strong. Scientists have been working to produce a dependable test for the disease in the living.

The United States' Food and Drug Administration is considering one such method. The method combines an examination by positron emission tomography with a drug that lights up beta-amyloid. The PET device makes scans or images that doctors can read.

Studies have shown that the drug florbetapir can light up beta-amyloid and show it on the images. Florbetapir is a radioactive coloring agent. It connects with plaques in the brain. This makes it possible for doctors to see the plaques.

In January, an expert advisory panel of the FDA debated whether florbetapir was ready for marketing. The group did not suggest that the FDA approve the drug at this time. Still, the experts said they made the judgment based on available information. And they asked for more information. They also set conditions for accepting florbetapir.

One condition is for the manufacturer to show evidence that florbetapir correctly identifies plaques. The other condition is that the manufacturer prepare a training program for experts in nuclear medicine. The advisory panel said the doctors reading the test need additional education to correctly identify the plaques.

The Food and Drug Administration will decide next month whether to accept the panel's suggestions. The FDA normally follows the advice of its expert advisers, but not always.

If it is approved, florbetapir would be the first agent permitted to measure plaque deposits in living patients. Still, the presence of plaques does not prove that a patient has Alzheimer's disease. Doctors say some people with amyloid plaques in their brains do not have the condition.

An estimated thirty million people around the world have Alzheimer's disease. In the United States alone, more than five million people suffer from this presently incurable brain disorder.

Alzheimer's affects memory and personality -- those qualities that make a person an individual. At first, people with the condition forget simple things, like where they left the keys to their car. But as time passes, they forget more and more. They may forget what a key is used for.

Patients forget the names of their husbands, wives or children. Then they forget who they are.