

Understanding Alzheimer's Disease: The Lost Self

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Alzheimer's disease (AD), which is a progressive, degenerative disease attacking the brain, was first described by Alois Alzheimer, MD, in 1906. In his journal notes, he described a patient who exhibited many of the symptoms seen in AD patients today. The most dramatic entry was the patient's own revelation—loss of self.

A person with normal forgetfulness forgets the name of someone or something and usually remembers later. But AD patients forget the person whose name they were trying to remember. And while we all forget parts of stories or unimportant facts of an experience, those with AD forget entire *recent* experiences. In normal situations, we rarely lose the capacity to orient ourselves, for example, when first waking up in a strange place. AD patients, however, lose the capacity to search for and use clues that would help them orient themselves in unfamiliar settings. Being lost inside their own bodies with irreversible loss of higher brain functions— is one of the most devastating aspects of this disease.

Two abnormal structures in the brain are the hallmarks of AD: amyloid plaques and neurofibrillary tangles. Plaques are dense deposits of protein and cellular material outside and around the brain's nerve cells. Tangles are twisted fibers that build up inside the nerve cells. Neither amyloid plaques nor tangles can be dissolved. Researchers are learning more about the plaques and tangles and their role in AD. But they still do not know whether the amyloid plaques themselves cause AD or whether they are a result of AD.

The earlier an accurate diagnosis of AD is made the greater the likelihood of managing symptoms and determining the natural history of the disease. If you are concerned about the mental status of a loved one, consider that AD patients usually exhibit the following problems:

- Problems with intellect (impaired memory, judgment, and abstract thinking)
- Problems with orientation (time, place, identity)
- Problems with language and communication
- Changes in personality (anxiety, irritability, agitation)

In normal aging, nerve cells in the brain are not lost in large numbers. However, AD disrupts three key processes—nerve cell communication, metabolism, and repair—ultimately causing many nerve cells to stop functioning, lose connections with other nerve cells, and die.

Stages of Alzheimer's

Early Stage

- Recent memory loss
- Lost initiative
- Confusion about places
- Changes in mood/personality
- Trouble with routine chores
- Trouble handling money, counting, making decisions

Middle Stage

- More memory loss and confusion
- Problems recognizing close friends
- Problems with motor function (twitching, jerking)
- Difficulty finding the right words
- Difficulty communication (repetitive statements)
- Difficulty with logical thinking
- Increasing suspicion, irritability, nervousness
- Inability to function without supervision

Late Stage

- Weight loss
- Inability to recognize family or image in mirror
- Inability to care for self
- Inability to communicate
- Inability to control bowels and bladder
- Difficulty swallowing
- Increasing skin infections
- Tendency to have seizures

At first, AD destroys neurons in parts of the brain responsible for memory, especially the hippocampus, a structure deep in the brain that helps encode memories. When nerve cells in the hippocampus fail to function properly, short-term memory fails, and often the ability to do easy and familiar tasks begins to decline. In addition, AD attacks the cerebral cortex, particularly the areas responsible for language and reasoning, robbing the person of language skills and the ability to make judgments. This may lead to personality changes and emotional outbursts. The AD patient may begin to exhibit disturbing behavior, such as wandering and agitation, which increases as the disease runs its course. Eventually, many areas of the brain are affected and begin to shrink. At this point in the disease, the patient becomes bedridden, incontinent, totally helpless, and unresponsive to the outside world.

Progress Report on Alzheimer's Disease available at: <http://www.alzheimers.org>

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