

# **Dementia**

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Dementia is a progressive condition that causes the sufferer to have problems with memory, thinking and behaviors beyond what is expected from the normal aging process. It is the most common neurological disorder in old age, although some types of dementia can occur earlier in the lifespan. Dementia is characterized by severe memory impairment, as well as problems with other psychological functions such as attention, reasoning and problem-solving. Late stage dementia can lead to total erosion of the person and self with the sufferer having trouble speaking, eating, walking and being able to dress themselves. The word dementia comes from the Latin word meaning “without mind” and there are several different types.

The most common type of dementia is Alzheimer’s disease, which accounts for approximately 60-80% of all dementias. In 2020, there was an estimated 5.8 million Americans living with the disease, accounting for approximately 10% of all individuals aged 65 years and older. The cognitive (or mental) deterioration is slow, progressive, and non-reversible. The first case of Alzheimer’s disease was reported by a German physician Alois Alzheimer in 1906. In his paper, he described a patient named Auguste Deter who had ‘strange’ behavioral symptoms, including loss of memory, irrational suspicions regarding her family, problems sleeping and eventually language troubles. A pioneer in linking clinical symptoms to brain changes, Alzheimer was able to examine Auguste Deter’s brain at autopsy and found microscopic plaques and tangles. These brain anomalies are the two hallmarks of the disease that are used for a definitive diagnosis of Alzheimer’s disease to this day.

Other, less common types of dementia are associated with different forms of brain disease. Vascular dementia is caused by multiple strokes (microscopic bleeding or blood vessel blockages in the brain), and these can sometimes even happen without the sufferer realizing. Symptoms include diminished judgment or decision-making skills, in contrast to the memory problems most commonly characteristic of Alzheimer's disease.

Another type is dementia with Lewy-bodies, which involves unusual clusters of the protein alpha-synuclein in the brain. Memory loss is a common symptom, but sufferers are more likely to have additional symptoms early

on such as visual hallucinations, problems with sleeping and stiff or rigid muscles. Frontotemporal dementia is the clinical presentation of a progressive loss of brain cells (neurons) predominantly involving the frontal and temporal lobes of the brain. Typical symptoms include changes in personality, planning, judgment and speech. People with this type of dementia typically experience onset of symptoms at earlier ages (approximately age 60 years) and additionally do not live as many years as individuals living with Alzheimer's disease. As with dementia with Lewy-bodies, Parkinson's disease is also associated with abnormal clumps of the protein alpha-synuclein, but in deep brain structures known to impact movement and dopamine production. Problems such as tremors, shuffling gait and motor co-ordination are common symptoms early in the disease.

Scientists that study dementia are trying to prevent, or at least slow down the progression of brain changes that accompany these diseases, because for the time being at least, the effects are irreversible.

### **Further Reading**

Genova, L. (2008). *Still Alice*. New York, NY: Pocket Books

Husain, M. & Schott, J.M. (Eds.). (2016). *Oxford textbook of cognitive neurology and dementia*. Oxford, UK: Oxford University Press.

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Trojanowski, J. (2007). *What if it's not Alzheimer's: A caregiver's guide to dementia*. Amherst, NY: Prometheus Books.