

Alzheimer's disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills, and, eventually, the ability to carry out the simplest tasks. After she died, he examined her brain and found many abnormal clumps (now called amyloid plaques) and tangled bundles of fibers (now called neurofibrillary, or tau, tangles). Dementia is the loss of cognitive functioning--thinking, remembering, and reasoning--and behavioral abilities to such an extent that it interferes with a person's daily life and activities. Neurons transmit messages between different parts of the brain, and from the brain to muscles and organs in the body. Scientists continue to unravel the complex brain changes involved in the onset and progression of Alzheimer's disease. Researchers are studying biomarkers (biological signs of disease found in brain images, cerebrospinal fluid, and blood) to detect early changes in the brains of people with MCI and in cognitively normal people who may be at greater risk for Alzheimer's. Abnormal deposits of proteins form amyloid plaques and tau tangles throughout the brain. By the final stage of Alzheimer's, damage is widespread, and brain tissue has shrunk significantly. Memory problems are typically one of the first signs of cognitive impairment related to Alzheimer's disease. For many, decline in non-memory aspects of cognition, such as word-finding, vision/spatial issues, and impaired reasoning or judgment, may signal the very early stages of Alzheimer's disease. Alzheimer's disease is currently ranked as the sixth leading cause of death in the United States, but recent estimates indicate that the disorder may rank third, just behind heart disease and cancer, as a cause of death for older people. Dementia ranges in severity from the mildest stage, when it is just beginning to affect a person's functioning, to the most severe stage, when the person must depend completely on others for basic activities of daily living. Studies indicate that such early detection is possible, but more research is needed before these techniques can be used routinely to diagnose Alzheimer's disease in everyday medical practice. Other dementias include Lewy body dementia, frontotemporal disorders, and vascular dementia. Some people with memory problems have a condition called mild cognitive impairment (MCI).