

## ACTIVITY 6B :STUDENT HANDOUT

### INTERESTING FACTS ABOUT DEMENTIA AND ALZHEIMER'S DISEASE

Alzheimer's disease (AD) is a type of dementia. A dementia is a group of symptoms characterized by an inability to remember and assimilate knowledge, so severe that it interferes with a person's normal daily activities and social relationships. Alzheimer's disease is the most common dementia among older people, encompassing approximately 70% of all dementing disorders. It is characterized by irreversible declines in memory, performance of daily tasks, time and space orientation, language and communication skills, and abstract thinking. Other symptoms include personality changes and impairment of judgment.

AD is a progressive disease, meaning that it occurs in 3 stages (*See the Alzheimer's Association handout "Stages of Symptom Progression in Alzheimer's Disease"*). The disease can last anywhere from 3 to 20 years, until the body wears down. Usually, the AD affected person will die of an infection such as pneumonia, due to their weakened body condition. At first, the AD affected person will experience short-term memory loss. This short-term memory loss is due to neuron deterioration in the hippocampal area of the brain. As AD spreads through the cerebral cortex, it begins to take away language skills. Disturbing behaviors such as wandering and agitation can occur as the disease progresses. In its final stages, AD wipes out the ability to recognize even close family members or to communicate in any way. All sense of self seems to vanish, and the person becomes completely dependent upon others for care.

At the present time, AD is uncontrollable; there is no prevention or cure. It can occur as early as the age of 40, but most cases occur after 65. AD cases rise exponentially with age. For example, 1 in 10 people aged 65 have AD; half of people aged 85 have AD.

A definite diagnosis of AD can occur only after death, at autopsy. The AD affected brain is covered with protein deposits around the nerve cells called plaques. Inside the cells of the affected brain, are twisted strands of protein fibers called tangles. It is unknown exactly what causes these plaques and tangles, but scientists have several theories.

There are only two known risk factors of AD: age and family history. As mentioned before, most cases occur after the age of 65. In most cases, there is a family history of AD; that is, most people had a relative who had AD. Other possible risk factors include head injuries and gender. Some studies have found that those who have had head injuries earlier in life have an increased risk of developing AD. Also, women may have a higher risk of developing the disease; however, this may be due to the fact that women have a longer life span than men. Research suggests that the more you exercise your brain with education and cognition, the more "brain connections" you strengthen. This helps you out later in life when AD starts to set in, so "strong brain connections" can delay onset and/or lessen the degenerative effects.

Another form of dementia occurs when a person's mental capabilities are impaired due to stroke(s). (Atherosclerosis can contribute to the formation of blood clots, which block the vessels, and can lead to stroke; see the Diabetes unit for more information on

atherosclerosis). This is called vascular dementia, or multi-infarct dementia. Vascular dementia has the same basic symptoms as AD, only it typically has an abrupt onset, and the patient may have a history of diabetes, obesity, or hypertension which lead to atherosclerosis, then ultimately stroke. Unlike AD, vascular dementia may be controllable by monitoring diet, weight, and/or factors leading to hypertension. Oftentimes, dementia can be a combination of both AD and vascular dementias.

Dementia can also be induced by alcohol. Alcohol is toxic to the body, killing brain cells with every drink. Alcohol-induced dementia has symptoms similar to AD, but if the person has a history of alcohol abuse, then this could be the cause of their dementia. Like vascular dementias, alcohol-induced dementias are controllable by eliminating/limiting alcohol intake.

Other dementias make up a very small percentage of total dementias. Some of these are Huntington's disease, Pick's disease, normal pressure hydrocephalus, Creutzfeldt-Jakob disease, Lewy's disease, and later stages of Parkinson's disease in some individuals. For more information on these other dementias, look at the Alzheimer's Disease and Related Disorders Fact Sheet (*An Overview of the Dementias* . )

