

What is Alzheimer's Disease?

Alzheimer's disease is a progressive, degenerative disease of the brain that causes serious impairment of thinking and memory. It is the most common form of dementia. Dementia refers to a number of symptoms that include loss of memory, judgment and reasoning, and changes in mood, behaviour and communication abilities. Dementia is symptomatic in many diseases, including Vascular Dementia, Frontotemporal Dementia, Creutzfeldt-Jakob Disease and Lewy body Dementia. Sometimes an individual will have more than one kind of dementia. This is called mixed dementias.

Alzheimer's disease was first identified by Dr. Alois Alzheimer in 1906. He described the two hallmarks of the disease: "plaques", which are numerous tiny, dense deposits scattered throughout the brain that become toxic to brain cells at excessive levels, and "tangles", which interfere with vital processes within the neurons or brain cells, eventually choking off the living cells. When brain cells degenerate and die, the brain shrinks in size.

The Effects of Alzheimer's Disease

Alzheimer's disease eventually affects all aspects of a person's life: how he or she thinks, feels, and acts. Since individuals are affected differently, it is difficult to predict the symptoms each person will have, the order in which they will appear, or the speed of the disease's progression.

In general the following will gradually be affected by the disease:

Mental abilities - A person's ability to understand, think, remember and communicate will be affected. The ability to make decisions will be reduced. Simple tasks that have been performed for years will become more difficult or be forgotten. The ability to find the right words and follow a conversation will be affected. Memory loss is a big part of Alzheimer's disease, affecting first short term memory (memory of recent events) and then long term memory (memories of past events). The long-term memory is slowly erased in a backwards sequence, with the most recent memories disappearing first.

Emotions and moods - A person may appear uninterested and apathetic, and may quickly lose interest in the hobbies they previously enjoyed. The ability to control mood and emotion may be lost. Some individuals become less expressive and more withdrawn. It is important to remember that all of these individuals still have the feelings and emotions of adults, even in the later stages of the disease.

Behaviour - Changes will develop in the way the person reacts to his or her environment and to other stimuli. These actions may seem out of character for the person. Some reactions include repeating the same action or words, hiding possessions, outbursts, and restlessness.

Physical abilities - The disease can affect a person's physical co-ordination and mobility, leading to a gradual physical decline. This will contribute to the person's inability to independently perform day-to-day tasks such as eating, bathing and getting dressed.

Research, Treatment and Strategies

There have been significant advances in treatments and research. Earlier diagnosis is improving the quality of life for many people who begin treatment in the early stages. Several medications may slow the decline of memory, language and thinking abilities in some people. Although these drugs do not

work for everyone, they are a valuable step forward in the treatment of Alzheimer's disease. Promising results are emerging from clinical trials of new drugs and vaccines that attack the disease process and provide hope for continued advances in treatment.

New behavioural strategies are also improving the lives of people with the disease. Therapeutic techniques, like physical activity and music therapy, are being used as viable and useful treatments. Research shows that the quality of life of people with Alzheimer's disease, and also their caregivers, is significantly improved by activities that emphasize their strengths and abilities. By understanding the people behind the disease, their life experiences, support systems and ways of coping, an individualized approach to care can be created that preserves and improves quality of life.

Risk Factors for Alzheimer's disease

The exact causes of Alzheimer's disease are not yet known, Researchers are recognizing that there is not just one definitive cause and many risk factors contribute to the development of Alzheimer's disease. Many of these risk factors are known but there are likely others that are yet to be identified. When too many of these risk factors are present, the brain's ability to repair and maintain itself is overwhelmed, and the disease process begins.

Age, gender, and genetics are risk factors that cannot be changed. However, it may be possible to reduce many of the other known risks for the disease through lifestyle choices.

Age - Advancing age is the most significant risk factor for Alzheimer's disease. Most people who develop Alzheimer's disease are over the age of 65. However the disease process is thought to begin years before the symptoms, such as memory impairment, become apparent. It is important to remember that most people do not get Alzheimer's disease as they age. It is not a normal part of aging.

Gender – Women have a much greater likelihood of developing Alzheimer's disease than men. The reasons for this are not clear. Women do live longer than men and so there are higher numbers of older women than older men. Researchers are also looking into whether chromosomal differences between women and men may contribute to the increased risk in women.

Genetics - The familial form of the disease (FAD), passed on directly from generation to generation, accounts for only about 7% of the total incidence of Alzheimer's disease. While the common form of the disease (sporadic Alzheimer's disease) also has some genetic links, much is still unknown. The majority of cases have no single identifiable cause. The role of genetics continues to be studied.

Other risk factors include

- Unhealthy eating habits
- Diabetes
- High blood pressure
- High cholesterol levels
- Strokes
- Obesity
- Stress
- Chronic inflammatory conditions
- History of clinical depression
- MCI (mild cognitive impairment)
- Low levels of physical activity
- Low socio-economic status
- Insufficient exercising of the brain
- Low levels of formal education
- Brain injury
- Smoking

Source:

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If you have any questions please contact us at pec@alzheimerontario.org