



Alzheimer's disease

What is Alzheimer's disease?

Alzheimer's disease is the most common form of dementia. Dementia is a serious loss of mental capacity that can result in confusion and permanent loss of memory. It is not a normal part of the ageing process. Most people who age do not develop dementia.

Alzheimer's disease is currently one of the four main causes of death in adult Australians, and is on the increase as our population ages. While it is more common in the elderly (people over 65 years), it can occur in the mid-50's. In all cases, it can cause great distress to family and friends.

Alzheimer's disease is named after the German neurologist Alois Alzheimer. In 1906 he described the characteristic plaques and tangles of brain fibres found in dead tissue of a person with the disease.

Research tells us that one in 25 people over the age of 60 will develop Alzheimer's disease, and at 80 years or older the incidence increases to one in five.

Symptoms

People with Alzheimer's disease get worse gradually. Symptoms expressed will differ from one person to another.

Early Symptoms include:

- Confusion;
- Unusual Irritability;
- Forgetfulness;
- Impaired Decision Making.

Late Symptoms include:

- Forgetting major events, names of loved ones;
- Inability to care for self or the home;
- Inability to manage daily responsibilities;
- May become obnoxious -personality changes;
- May have trouble sleeping, using toilet and eating.

Later symptoms may take anywhere from months to years to develop. Other symptoms include loss

of initiative, reduced physical activity, loss of orientation, loss of speech, stiff muscles.

During the later stages of deterioration, the person usually requires full-time nursing and could become bedridden.

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Causes

Research is continuing to find causes and risk factors for Alzheimer's disease.

We know that brain cells are lost at a greater rate than normal. This cell loss affects parts of the brain responsible for thoughts, personality and intelligence.

Diagnosis

Diagnosis can be difficult. All other diseases and medical problems such as thyroid problems, infection, depression and brain tumours, must be eliminated first. Neurologists and psychologists assess levels of skill and general knowledge to determine the rate of mental deterioration.

Up to 20% of cases of Alzheimer's disease appear to have a genetic component, particularly where onset is early (before 65 years of age). Considerable advances being made in this area of research mean the availability of genetic screening may not be far off.

The Latest Research Findings

The Alzheimer's Disease Research Group includes neuroscientists from the Mental Health Research Institute. The Group's most outstanding achievement to date has been isolating the protein that is now recognised as the major indicator of the presence of Alzheimer's disease.

By analysing the deposits of plaques and tangles found in the brains of people with Alzheimer's disease, the Group discovered these deposits are made up of β A4 protein which has crystallised abnormally, is insoluble and cannot be metabolised by the brain.

The Group is now investigating why these protein deposits occur. This includes looking for major environmental risk factors that influence the way the brain handles β A4 such as head injury, heavy metal exposure and stress. The aim is to find a way of delaying the onset of the disease so that its symptoms never appear, or to eliminate it altogether.

The Group is also working with major drug companies to find compounds that will react with the β A4 protein and slow down the development of deposits. This will enable the development of drugs that will benefit those people at risk of developing Alzheimer's disease, and retard its progress in those who already have it.

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Alzheimer's disease in society

Often it is not only the person afflicted with a disease that needs help. Carers, friends, spouses or family members who are close to a person with Alzheimer's disease may also need support. A number of networks exists that can make life easier for all associated with the illness.

These include groups like the Alzheimer's Association Victoria, Aged Care Assessment Teams, Residential Respite Care as well as Home & Community Care Programs.

Research Programs

A number of research projects using varied techniques are currently being undertaken by the Institute. Visit our website or request our latest Annual Report to find out more about what's happening in the following laboratories:

- Alzheimer's Disease Research Group;
- Oxidative Stress Laboratories;
- AIBL Study.

Support and Information Services

- Alzheimer's Australia Victoria
98 Riversdale Road, Hawthorn 3122
Tel: 1800 100 500
www.alzheimers.org.au
- Aged Care Assessment Teams
Visit www.healthconnect.gov.au for local contact details

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