



# ALZHEIMERS DISEASE

Dementia – also known as “Neurocognitive Disorder (mild or major)” – is an umbrella term for a group of different disorders that physically affect the brain causing a progressive deterioration in memory, thinking and behaviour. Alzheimers Disease is the most common form of dementia, accounting for somewhere between 50-75% of all dementias (ADI 2016).

Once dementia has been diagnosed, it is useful to try to decide what is causing it; by knowing the type of dementia you can have some idea of its likely course. It is not always possible to decide on the type of dementia and to make it more complicated, two forms may be present in a “mixed dementia” e.g. both Alzheimers and vascular.

This disease was first described in 1907 by a German neurologist, Alois Alzheimer. Microscopically, his patient’s brain showed characteristic changes: plaques and tangles. The plaques are caused by a build-up of an abnormal protein called “amyloid” outside the brain cells. The tangles inside the brain cells are formed by another protein called “tau”. The abnormal proteins prevent messages being passed between cells, damage connections and eventually cause cell death. As the cells die, the brain shrinks. This brain damage probably starts decades before dementia becomes apparent, but at a certain point, the brain stops compensating for cell loss and cannot function properly.

## Symptoms:

The following symptoms may occur in all types of dementia including Alzheimers Disease:

- *Memory loss* especially for recent events, though later on longer term memory is also affected.
- *New learning declines.*
- Reduction in the *ability to pay attention* when there are other things going on around the person e.g. it may be difficult to think when the TV is on in the background or doing two things at once e.g. continuing a conversation while preparing a meal. Need to focus on one task at a time.
- Difficulties *planning and making decisions.* Not being flexible in shifting between tasks.
- *Language problems* such as difficulty expressing oneself and understanding others, forgetting words and making grammatical errors.

Changes in perception and motor function. This might mean that the person has difficulty judging distance, recognising faces or performing tasks like doing up buttons.

*Changes in social behaviour* e.g. not greeting or farewelling others, forgetting to use cutlery, (though social skills are often present for a long time in Alzheimers Disease).

## Making the Diagnosis

The diagnosis is made when the course follows the usual pattern of Alzheimers Disease and nothing else is found that could cause the dementia. (This is a “diagnosis of exclusion”.) The diagnosing doctor will take a medical history from the patient and someone who knows them, examine the person, do cognitive tests (usually the MOCA, but maybe a longer test), order blood / urine tests and possibly arrange a CT brain scan. There is no definitive test for Alzheimers, though some sophisticated scans, not widely available (amyloid PET scans) can be very useful. Genetic testing helps if there is a family history of Alzheimers Disease. All DHBs have a “Cognitive Impairment Pathway” that the GP can follow to make the diagnosis and there are specialists available for consultation.

## Characteristics and course of Alzheimers Disease:

The onset of Alzheimers disease is often hard to pinpoint as it begins so subtly. Usually memory and learning problems occur early on, though people behave normally in social situations even late in the condition. The progression is gradual and smooth without plateaus. About 80% of people with Alzheimers Disease develop psychological and / or behavioural problems such as depression or apathy early on and psychosis, irritability, agitation or wandering in the mid-late stages. With severe Alzheimers Disease incontinence, gait disturbance, difficulty swallowing, and seizures occur. Survival time after diagnosis is 10- 20 years.

## Who gets Alzheimers Disease?

Generally, Alzheimers is a disease of old age. However, it can begin in people aged less than 65 years. People with Down syndrome and their first degree relatives are more likely to develop Alzheimers Disease than the general population. There are rare familial forms of inherited Alzheimers Disease that begin in younger people. Anyone carrying two "APOE4" genes has a slightly increased risk. You can be tested for APOE4, but this is not necessarily helpful information, since if you live long enough your chances of getting dementia are quite high anyway. People with traumatic brain injury are also more at risk. By the age of 95 you have a 50% chance of suffering from dementia of one type or another.

## Risk Reduction

Research has shown that the following things decrease the risk of getting Alzheimers Disease:

- Physical activity
- Social activity – avoid loneliness
- Mental activity- try new and challenging intellectual activities
- Stopping smoking
- Managing blood pressure, cholesterol, blood sugar and weight
- Good food choices: Mediterranean diet
- Protect your head
- Reduce stress

This publication provides a general summary only of the subject matter covered. People should seek professional advice about their specific case.

## Treatment

**Drug Treatment:** There are four drug treatments that help some people with Alzheimer's disease. These treatments may slow the progression of the disorder but do not very often restore skills that are lost. The medications available in New Zealand are: donepezil, rivastigmine, galantamine and memantine. Only donepezil tablets and rivastigmine patches are funded, so the others must be paid for privately. (For further information see Fact Sheet # ).

**Non-drug treatments:** Doing the things that reduce risk (above), also slows the rate of decline in Alzheimers Disease. A promising new treatment is *Cognitive Stimulation Therapy (CST)* which has been shown to improve symptoms in most forms of dementia. In CST, a group (occasionally an individual) carry out a range of enjoyable activities that provide general stimulation for thinking, concentration and memory. CST is available through many Dementia NZ branches.

Dementia New Zealand offers support, information and education.

Ring 0800 4 DEMENTIA or 0800 433 636.

Or visit our website at [www.dementia.nz](http://www.dementia.nz)