



National
Intellectual
Disability
Memory
Service

Alzheimer's Disease in Down Syndrome Factsheet

Dementia is a group of symptoms which can affect memory, thinking and behaviour severely enough to interfere with daily life.

Alzheimer's Disease (AD) is the most common type of dementia. Dementia is the loss of cognitive functioning— thinking, remembering, and reasoning and behavioural abilities— to such an extent that it interferes with a person's usual daily life and activities.

How does it develop?

Down syndrome is caused by triplication of Chromosome 21. A gene responsible for making a protein called 'amyloid' is found on Chromosome 21, meaning people with Down syndrome make more of this protein.

This protein, along with another one, 'tau', builds up in the brain from late teenage years/early adulthood, and causes loss of connections between nerve cells (neurons). These proteins cause Alzheimer's Disease (AD).

Neurons transmit messages between different parts of the brain, and from the brain to muscles and organs in the body. In AD the messages get disrupted and do not flow normally. As the proteins build up, they cause problems with thinking and behaviours.

Symptoms of AD can get worse over time and normal shrinkage of our brain as we age can be accelerated

What are the symptoms?

The symptoms of AD vary from person to person but it usually progresses gradually.

Symptoms include short term memory problems; language issues such as word finding; vision / spatial issues; impaired reasoning or judgment; orientation difficulties; repeating questions; taking longer to complete normal daily tasks, and for some personality and changes in behaviour.

How is it diagnosed?

We use a combination of memory tests, functional tests, and scans, but our most important clue is the story of the symptoms and how they have changed over time.

What is the treatment for AD?

Although we currently have no drug that can stop these brain changes, drugs called cholinesterase inhibitors may help to reduce symptoms for some patients.

AD is a *gradually* progressive disease and is very much determined by 'events' such as falls, infections and delirium

From the time of diagnosis, our focus will be to maximise health and wellbeing in order to prevent such events. We will signpost you to the available supports in our care pathway.

We will also follow up with you to give any help yourself or you family might need going forward.