

What is Alzheimer's disease?

Alzheimer's disease is the most common form of dementia, affecting around 417,000 people in the UK. This information sheet outlines the symptoms and causes of Alzheimer's disease, and describes what treatments are currently available.

Alzheimer's disease, first described by the German neurologist Alois Alzheimer, is a physical disease affecting the brain. During the course of the disease 'plaques' and 'tangles' develop in the structure of the brain, leading to the death of brain cells.

We also know that people with Alzheimer's have a shortage of some important chemicals in their brain. These chemicals are involved with the transmission of messages within the brain.

Alzheimer's is a progressive disease, which means that gradually, over time, more parts of the brain are damaged. As this happens, the symptoms become more severe.

Symptoms

People in the early stages of Alzheimer's disease may experience lapses of memory and have problems finding the right words. As the disease progresses they may:

- Become confused, and frequently forget the names of people, places, appointments and recent events.
- Experience mood swings. They may feel sad or angry. They may feel scared and frustrated by their increasing memory loss.
- Become more withdrawn due either to a loss of confidence or to communication problems.

As the disease progresses, people with Alzheimer's will need more support from those who care for them. Eventually they will need help with all their daily activities.

While there are some common symptoms of Alzheimer's disease, it is important to remember that everyone is unique. No two cases of Alzheimer's are likely to be the same. People always experience illness in their own individual way.

What causes Alzheimer's disease?

So far, no one single factor has been identified as a cause for Alzheimer's disease. It is likely that a combination of factors, including age, genetic inheritance, environmental factors, diet and overall general health, are responsible.

Age

Age is the greatest risk factor for dementia. Dementia affects one in 14 people over the age of 65 and one in six over the age of 80. However, Alzheimer's is not restricted to elderly people: there are 15,000 people under the age of 65 with dementia in the UK, although this figure is likely to be an underestimate.

Genetic inheritance

Many people fear that they may inherit Alzheimer's disease. Scientists are currently investigating the genetic background to Alzheimer's.

We do know that there are a few families where there is a very clear inheritance of the disease from one generation to the next. This is often in families where the disease appears relatively early in life.

In the vast majority of cases, however, the effect of inheritance seems to be small. If a parent or other relative has Alzheimer's disease, your own chances of developing the disease are only a little higher than if there were no cases of Alzheimer's in the immediate family.

Environmental factors

The environmental factors that may contribute to the onset of Alzheimer's disease have yet to be identified. A few years ago, there were concerns that exposure to aluminium might cause Alzheimer's disease. However, these fears have largely been discounted.

Other factors

Because of the difference in their chromosomal make-up, people with Down's syndrome who live into their 50s and 60s may develop Alzheimer's disease.

People who have had severe head or whiplash injuries appear to be at increased risk of developing dementia. Boxers who receive continual blows to the head are also at risk.

Research has also shown that people who smoke and those who have high blood pressure or high cholesterol levels increase their risk of developing Alzheimer's.

Getting a diagnosis

If you are concerned about your own health, or the health of someone close to you, it is important to seek help from a GP.

An early diagnosis will:

- help you plan for the future
- enable the person with dementia to benefit from the treatments that are now available

- help you identify sources of advice and support.

There is no straightforward test for dementia. A diagnosis is usually made by excluding other causes. The GP or specialist will need to rule out infection, vitamin deficiency, thyroid problems, brain tumours, the side-effects of drugs and depression.

Specialists

Your GP may ask a specialist for help in carrying out a diagnosis. The specialist may be an old-age psychiatrist, a neurologist, a physician in geriatric medicine or a general psychiatrist. Who you see depends on the age of the person being examined, how physically able they are, and how well services are developed in the area.

Tests

The person being tested will usually be given a blood test and a full physical examination to rule out or identify any other medical problems. The person's memory will be assessed, initially with questions about recent events and past memories. Their memory and thinking skills may also be assessed in detail by a psychologist.

A brain scan may be carried out to give some clues about the changes taking place in the person's brain. There are a number of different types of scan, including CT (computerised tomography) and MRI (magnetic resonance imaging).

Treatment

There is currently no cure for Alzheimer's disease. However, some drug treatments are available that can ameliorate the symptoms or slow down the disease progression in some people.

People with Alzheimer's have been shown to have a shortage of the chemical acetylcholine in their brains. The drugs Aricept, Exelon and Reminyl work by maintaining existing supplies of acetylcholine. These drugs are available to people in the moderate stages of dementia, and at your GP's discretion, for people in the early stages. Please refer to the National Institute for Clinical Excellence (NICE) guidance at <http://www.nice.org.uk/> for the most up-to-date information. Side-effects may include diarrhoea, nausea, insomnia, fatigue and loss of appetite.

A drug called Ebixa was launched in the UK in 2002. This drug works in a different way to the other three - it prevents the excess entry of calcium ions into brain cells. Excess calcium in the brain cells damages them and prevents them from receiving messages from other brain cells. Ebixa is the only drug that is suitable for use in people in the middle to later stages of dementia. Side-effects may include hallucinations, confusion, dizziness, headaches and tiredness.

These drugs are not a cure, but they may stabilise some of the symptoms of Alzheimer's disease for a limited period of time.

Caring for someone with dementia

Much can be done at a practical level to ensure that people with Alzheimer's live as independently as possible for as long as possible.

The Alzheimer's Society has a range of information sheets and guides for people with dementia and their carers. Local branches also provide support to carers and people with dementia.

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