

# What is vascular dementia?



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## Introduction

Information in this booklet is for anyone who wants to know more about vascular dementia. This includes people living with vascular dementia, their carers, families and friends. The booklet gives an overview of the causes, symptoms and treatments.

This information does not replace any advice that doctors, nurses or pharmacists may give you. If you are worried about your health, including memory and thinking problems, speak to your doctor as soon as possible.

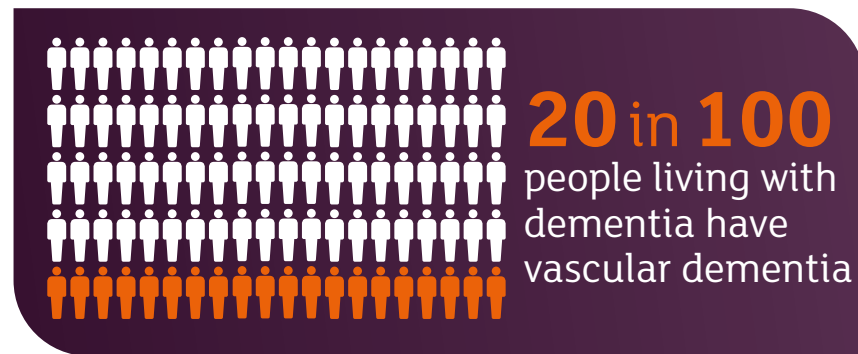
The booklet was updated in December 2021 and is due for review in December 2023, it was written by Alzheimer's Research UK's Information Services team with input from lay and expert reviewers. Please get in touch using the contact details below if you'd like a version with references or in a different format.

If you have questions about dementia or dementia research you can contact the **Dementia Research Infoline** call **0300 111 5111** email [infoline@alzheimersresearchuk.org](mailto:infoline@alzheimersresearchuk.org)  
Or write to us using the address on the back page.

## What is vascular dementia?

The term dementia describes a group of symptoms that may include memory loss, confusion, language and communication problems, issues with sight, mood and personality changes and difficulty with day-to-day tasks. The symptoms of dementia get worse as time goes on, so over time a person will need more help with everyday life.

Dementia is caused by diseases that affect the brain, the most common being Alzheimer's. Vascular dementia is the second most common type of dementia, for every 100 people with dementia, 20 of those people will have vascular dementia. Sometimes you can have both vascular dementia and Alzheimer's disease at the same time; this is called mixed dementia.



Age is the biggest risk factor for vascular dementia, followed by high blood pressure. The older we get, the more likely we are to develop vascular dementia. Most people with the condition are over the age of 65.

Vascular dementia occurs when blood vessels in the brain, specifically arteries, are damaged. These arteries deliver blood from the heart to the brain. Our blood contains oxygen and nutrients that help the brain cells to work properly. When blood vessels are damaged, this reduces blood flow to the brain cells. This affects how our brain cells work and causes them to become damaged too, which can lead to symptoms of dementia, like memory and thinking problems.

Sometimes this blood vessel and brain cell damage can cause memory and thinking problems that are mild and therefore are not diagnosed as dementia. This is sometimes called vascular mild cognitive impairment.

## Types of vascular dementia

There are different causes of vascular dementia depending on how the blood vessels have been damaged. Not everyone is told a specific cause for their vascular dementia at the time of diagnosis, and sometimes someone can have more than one cause of vascular dementia.

### Post-Stroke dementia

Post-stroke dementia means the development of dementia after having a stroke. A stroke occurs when blood supply to a part of the brain is suddenly cut off. This usually happens when a large artery within the brain is blocked by a blood clot. Sometimes it can be because an artery bursts and bleeds into the brain.

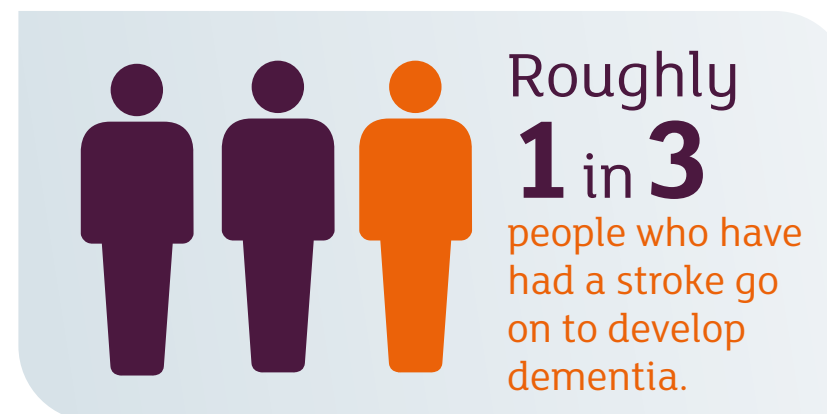
This is called a haemorrhagic (bleeding) stroke and is usually due to a weakness in the artery wall, called an aneurysm. A stroke can cause problems with movement, sensation coordination, speech or sight depending on the part of the brain affected.

If someone has problems with memory and thinking after a stroke which do not improve over time, they may be diagnosed with post-stroke vascular dementia.

Unfortunately, people who have a stroke are more likely to have more strokes, and so have a higher risk of developing dementia in the future.

Post-stroke dementia can also be caused by multiple smaller strokes which cause progressive damage to the brain. Some of these smaller strokes are called 'mini-strokes' or 'transient ischaemic attacks'.

Sometimes these strokes can be so small, that someone may not experience any symptoms or know that they are having one. However, over time, the damage to the brain leads to dementia. Previously, this type of dementia was known as 'Multi-infarct dementia'. The word 'infarct' means that an area of the brain has had its blood supply cut off and the brain has become damaged.



**Small vessel disease (SVD) of the brain**

Vascular dementia can also be caused by damage to small arteries that supply blood to the brain. This is called small vessel disease (SVD). Because these small arteries only supply a very tiny area of the brain, when the damage occurs it is not noticeable to the person. However, over time the damage can spread and lead to dementia.

Every part of the brain contains these small arteries, so the area of the brain affected by SVD can vary from person to person. However, common symptoms for people with SVD include problems with concentration and thinking, changes in personality or mood, loss of memory, difficulty walking or problems with balance.

The damage to blood vessels and brain cells caused by small vessel disease happens over many years. Someone with SVD may not notice these changes until it starts to affect their memory and thinking, which will get worse over time. This is different to the sudden change in memory and thinking that can happen after a stroke.

The main cause of small vessel disease is high blood pressure (also known as hypertension). SVD can also be caused by the build of the protein amyloid in arteries in the brain. This is the same protein involved in the development of Alzheimer's disease, and so someone can have both conditions at the same time. This is often called mixed dementia.



## Risk factors

There are factors that can increase someone's risk of vascular dementia, as they all increase the likelihood of damage to blood vessels in the brain.

### These factors include:

- smoking
- high blood pressure
- high cholesterol
- type 2 diabetes
- obesity
- low levels of physical activity
- heart problems.

Having a stroke is a risk factor for developing vascular dementia. Risk factors that make a stroke more likely to happen are the same as listed above. One in every three people who have had a stroke go on to develop dementia. Most of these cases are thought to be vascular dementia.

Some of the risk factors listed can have a genetic susceptibility. This means we may inherit a risk of developing high blood pressure, diabetes, or high cholesterol and these problems can run in families.

But for everyone, managing high blood pressure and high cholesterol might help to lower the risk of vascular dementia and stroke. Research also suggests that regular exercise and a healthy diet, especially in midlife and into later life, might also help to lower our risk of dementia.



**For good brain and heart health, and to help lower your risk of vascular dementia:**



Keep cholesterol and blood pressure under control



Don't smoke



If you have diabetes, ensure your condition is managed well



Maintain a healthy weight



Only drink alcohol in line with government recommendation



Eat a healthy balanced diet



Keep active and exercise regularly



Maintaining a healthy lifestyle in your forties and fifties seems to be particularly important for helping to lower your risk of dementia. This includes not just staying physically active but also keeping mentally and socially active.

In very rare cases, vascular dementia can be caused by an inherited genetic disorder. One example of this is a disorder called CADASIL (cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy). People with this disorder often have a family history of stroke as well as dementia.

If you are concerned about rare inherited forms of vascular dementia, you should discuss this with your doctor who may be able to refer you to a specialist clinic.

## Symptoms

Vascular dementia can have symptoms similar to Alzheimer's and other forms of dementia. These may include memory loss, confusion and problems with communication. But there can also be more specific symptoms. These will depend on the cause of the vascular dementia and the area of the brain affected.

Symptoms in post-stroke dementia might occur immediately or soon after a stroke event, people are sometimes described as having a "stepwise" decline in their overall functioning. Symptoms in small vessel disease often develop in a more gradual way, this means the symptoms will get worse over time. The speed of change can vary over time and from person to person.

In the later stages of dementia, the condition affects most aspects of everyday life. This means that over time people may need help and support with eating, dressing, washing, and using the toilet.



## Vascular dementia symptoms may include:



### Slower thinking

Taking more time to process information, follow instructions or to plan ahead.



### Speaking

Struggling to find the right words, slurring speech or difficulty following conversations.



### Personality changes

People may become low in mood, have reduced motivation or be more emotional, or lose interest in what's happening around them.



### Movement problems and stability

Difficulty or unsteadiness walking or changes in the way a person walks.



## Diagnosis

Diagnosing dementia is important. It means someone can get the right treatments, support and help with their condition. If you are worried about dementia symptoms, or someone else's, you should talk to your doctor as soon as possible.



### The doctor will:

- Ask about your symptoms and how they are affecting you.
- Ask a relative or close friend if they have noticed any changes.
- Check your medical history.
- Give you a physical check-up, checking your blood pressure and balance.
- Run a blood test, to rule out some possible causes like vitamin deficiencies and thyroid disorders. They may also ask you for a urine sample.
- Ask you to do some memory and thinking tests.
- If your doctor suspects dementia, you may be referred to a memory clinic or another specialist doctor.



### A memory clinic or specialist may:

- Do another physical check up and some more memory and thinking tests.
- Send you for other tests like a brain scan. Brain scans such as CT (computerised tomography) or MRI (magnetic resonance imaging) can be used to give a diagnosis of vascular dementia.
- The scans show the doctors changes in blood vessels or signs of a stroke/s.
- Together the results of all of these tests will help the doctor to identify the likely cause of the symptoms.

For more information on getting a dementia diagnosis you can ask us for our information '**Problems with your memory?**' Get in touch or order this information using the details on the back page.

## Treatments

**There are currently no specific treatments for vascular dementia. However, a doctor may prescribe or monitor medicines taken to treat the underlying conditions that can damage blood vessels and vascular dementia. These include medications for diabetes, stroke, high blood pressure, high cholesterol and heart problems.**

A doctor will also advise taking up a healthy lifestyle to help control these underlying conditions. This could include stopping smoking, doing more exercise, maintaining a normal weight and eating healthily.

People diagnosed with vascular dementia may benefit from cognitive therapy. These activities are designed to stimulate thinking skills and engage people. They are often group-based and include games with an emphasis on enjoyment.

Some people with vascular dementia may have symptoms of anxiety, agitation and aggression. To treat these symptoms a doctor may first assess someone's general health and their environment. This can help to identify causes or triggers of agitation or aggression. Working to remove or change these triggers can help to alleviate these symptoms.

Non-drug treatments, such as aromatherapy or music therapy, may also be helpful for people with anxiety, agitation, and aggression. You can speak to your doctor about what therapies might be suitable and available.

If someone experiences severe and distressing symptoms that can't be controlled without medication, then antipsychotic drugs may be considered. However, these can have severe side-effects, and are not suitable for everyone. Anyone taking antipsychotics should be carefully and regularly monitored by their doctor.

### Treatments for vascular dementia:

- Medicines to treat or prevent underlying conditions like stroke, high blood pressure or diabetes.
- Cognitive behavioural therapy or speech therapy.
- Music therapy, aromatherapy.
- Medication for anxiety, agitation, and aggression such as antidepressants or antipsychotics when appropriate.

For people with both vascular dementia and Alzheimer's (mixed dementia), there are some drugs that may help with the symptoms. You can discuss these treatment options with the doctor.

For more information about dementia treatments, ask for our '**Treatments for dementia**' information. Contact details can be found on the back of this booklet.

## Support

There is a range of support organisations that offer practical and emotional support for people with dementia and those helping to care for them.

If you have questions about symptoms, diagnosis, or treatments for dementia you can contact the Alzheimer's Research UK **Dementia Research Infoline** on **0300 111 5111** or **infoline@alzheimersresearchuk.org**

The **Admiral Nurse Dementia Helpline** is provided by Dementia UK. The Helpline is run by dementia nurses who can give practical and medical advice, support and care tips. Call **0800 888 6678** or email **helpline@dementiauk.org**

The **Stroke Association** provides information and support for those who have experienced a stroke. Call **0303 3033 100** or visit their website **www.stroke.org.uk**

**Alzheimer's Society** provides dementia care information, emotional support, and local support groups. Call **0333 150 3456** or email **dementia.connect@alzheimers.org.uk**

**Alzheimer Scotland** offers support services, information and advice to people in Scotland. Call **0808 808 3000** or email **info@alzscot.org**



For more details of other helpful dementia organisations, ask us for our booklet '**Support for people affected by dementia: organisations that can help**'. Contact and order details can be found on the back of this booklet.

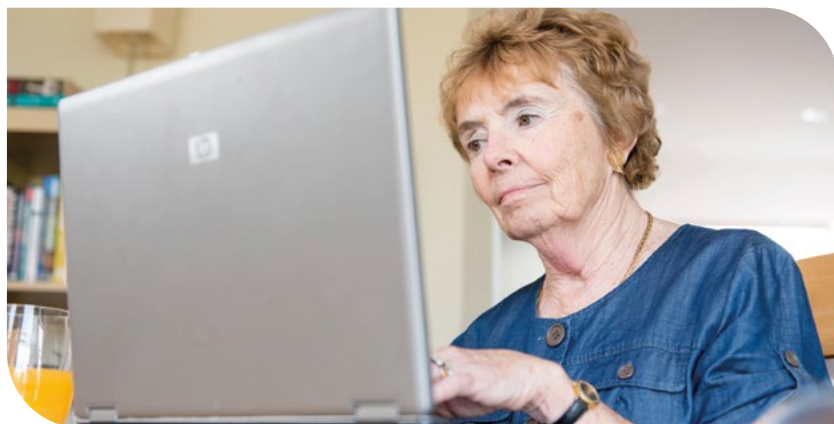
You can also speak to your doctor or practice nurse for advice and signposting to local services.

## How to get involved

People with and without dementia, and dementia carers are needed for research studies.

If you're interested in taking part in research and would like to find out more you can contact Alzheimer's Research UK's Dementia Research Infoline on **0300 111 5111** or **infoline@alzheimersresearchuk.org**

You can register to the **Join Dementia Research** service, which is run by the NHS. This will match you to research studies you are suitable for, so you can see what type of research you could take part in. You can find out more and register here **www.joindementiaresearch.nihr.ac.uk** you can also register over the telephone on **0300 111 5111**.



## Research

Alzheimer's Research UK has funded more than £4.3 million of pioneering research to help advance our understanding of vascular dementia.

We've funded nearly **70 research projects**, including studies to investigate how blood vessels can become damaged in the brain and how this damage causes the symptoms seen in vascular dementia. Our scientists are also working to develop new ways of preventing and diagnosing vascular dementia.

Backed by our passionate scientists and supporters, we're challenging the way people think about dementia, and investing in research to make breakthroughs possible.

Alzheimer's Research UK is the UK's leading dementia research charity dedicated to making life-changing breakthroughs in diagnosis, prevention, treatment and cure.

We provide free dementia health information, like this booklet and others. If you would like to view, download or order any of our other booklets please details below.

**Contact us**

**0300 111 5111**

**[infoline@alzheimersresearchuk.org](mailto:infoline@alzheimersresearchuk.org)**

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**Visit**

**[www.alzheimersresearchuk.org/dementia-information](http://www.alzheimersresearchuk.org/dementia-information)**

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