



Alzheimer's
Research
UK

All about dementia



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Introduction

This information is for anyone who wants to know more about dementia and the diseases that cause it. This includes people living with dementia, their carers, friends, and family.

This booklet gives an introduction to the four most common types of dementia - Alzheimer's disease, dementia with Lewy bodies, vascular dementia, and frontotemporal dementia. It covers:

- what they are
- typical symptoms
- causes
- diagnosis.

There is also information about how you can help lower your risk of developing dementia, and what support is available to people with dementia and their families. The information here does not replace any advice that doctors, pharmacists, or nurses may give you but provides some background information that we hope you will find useful.

This booklet was updated in November 2020 and is due to be reviewed in November 2022. 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 Or write to us using the address on the back page.

What is dementia?

Dementia is not a disease in itself. It is a word used to describe a group of symptoms that occur when brain cells stop working properly. This happens to specific areas of the brain that control how you think, remember, and communicate.

Common dementia symptoms include the gradual loss of memory, a decline in communication skills and difficulty with thinking and problem solving. Dementia is caused by diseases that affect the brain.

Alzheimer's disease is the most common cause of dementia, accounting for about two-thirds of cases in older people. In the UK, about 500,000 people are living with Alzheimer's. After Alzheimer's disease, the most common causes of dementia are vascular dementia, dementia with Lewy bodies, and frontotemporal dementia. Other causes include Parkinson's disease dementia, posterior cortical atrophy, and primary progressive aphasia.

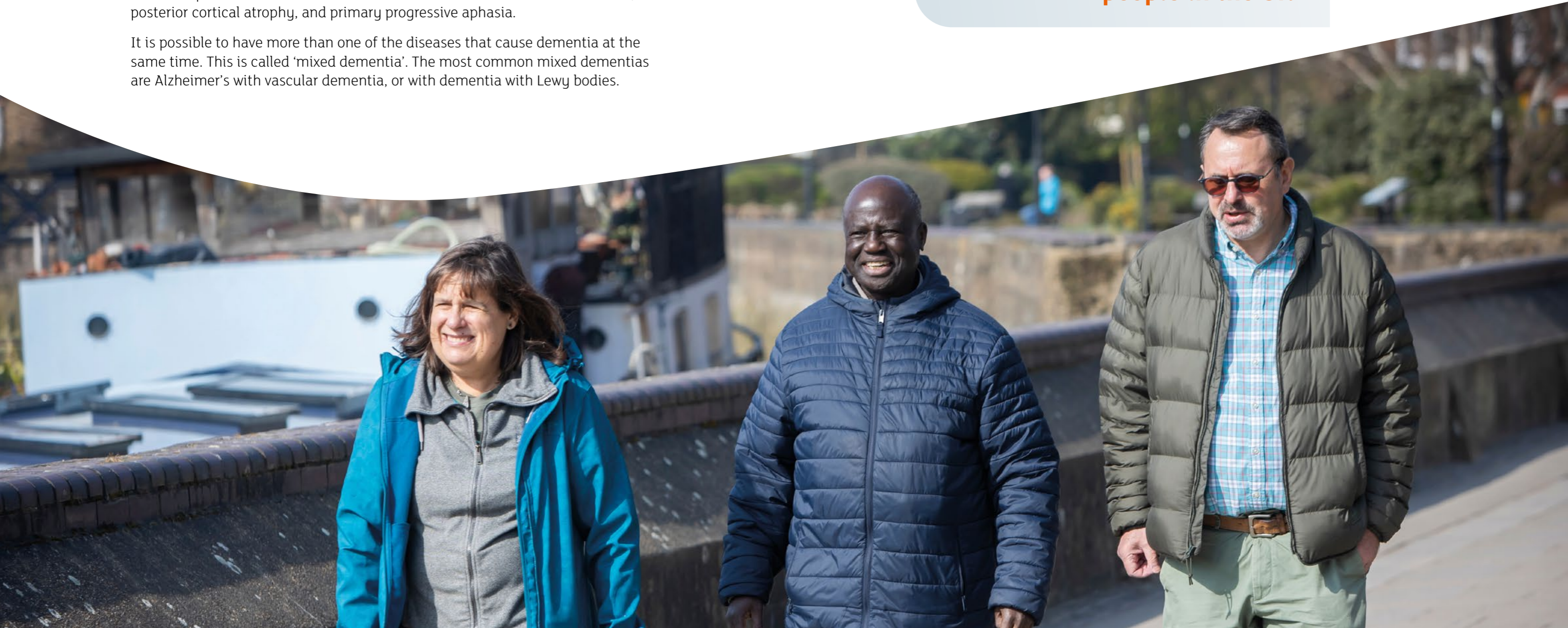
It is possible to have more than one of the diseases that cause dementia at the same time. This is called 'mixed dementia'. The most common mixed dementias are Alzheimer's with vascular dementia, or with dementia with Lewy bodies.

There are many other rarer causes of dementia, such as Creutzfeldt-Jakob disease (CJD), HIV/AIDS and alcohol-related dementia. You can find out more about these on our website or by calling us.

Dementia affects almost 1 million people in the UK. Most people with dementia are over 65 years old, but over 40,000 people under 65 have dementia too. When dementia affects people under the age of 65 it is often called young onset or young onset dementia. The most common causes are early-onset Alzheimer's disease and frontotemporal dementia. A range of other rarer conditions may also cause young onset dementia.

Dementia affects almost

1 million
people in the UK



I keep forgetting things. Have I got dementia?

Most of us forget things every day, like people's names or where we put our keys, but this is not necessarily a sign of Alzheimer's disease or another type of dementia.

For a person with dementia, memory loss is more serious than forgetting things occasionally and it starts to affect everyday life.

There are many reasons why people become forgetful. Some medications can affect our memory, as can underlying infections such as urinary infections. Depression, anxiety, vitamin deficiency and thyroid problems can also cause forgetfulness and problems with concentration. Your doctor can run tests to detect and treat some of these problems and it is important to contact them if you have any concerns about your memory.

Mild cognitive impairment

Many people have a natural decline in memory and thinking as they get older. In some people this is a sign of a condition called mild cognitive impairment (MCI), where problems with memory are worse than expected for their age. However, these problems do not tend to get in the way of a person's day-to-day life.

MCI can be caused by a range of underlying conditions and may or may not get worse over time. MCI does not always lead to dementia but could indicate the early stages of a disease like Alzheimer's. For more information, you can request our booklet '**What is mild cognitive impairment?**'.

If you are worried about your memory, if it is getting worse, or interfering with everyday life, you should talk to your doctor.

Dementia often develops slowly and is not always obvious in the early stages. Symptoms similar to dementia can be seen in other illnesses. Sometimes it can be difficult to tell the difference between dementia and the usual mild forgetfulness seen in normal ageing.

Symptoms

You should see your doctor if you or your family and friends are worried about any changes in your:



Memory



General mental functioning



Ability to carry out daily tasks



Personality



Behaviour

Your doctor will be able to assess your symptoms and, if necessary, refer you to a specialist. Diagnosing dementia early is important to allow you to get the right help and treatments and to plan for the future.

Everyone with dementia will experience symptoms in their own way and every person's progression is unique. While the diseases that cause dementia can have different symptoms early on, sometimes these can overlap.

Where possible, diagnosing which disease is causing a person's dementia symptoms is important.

Alzheimer's disease

Alzheimer's disease is the most common cause of dementia, accounting for 2 out of 3 cases.

Symptoms are often subtle to begin with and can be mistaken for other conditions like depression and anxiety.

Typical symptoms of Alzheimer's include:

- **Regularly forgetting recent events**, names, and faces.
- **Becoming increasingly repetitive**, e.g. repeating questions after a very short interval.
- **Regularly misplacing items** or putting them in odd places.
- **Getting confused** about the date or time of day.
- **Being unsure of where you are** or getting lost more often.
- **Having problems finding the right words.**
- **Changes in mood or behaviour** such as loss of interest in daily activity, becoming easily upset or annoyed or losing confidence.

Vascular dementia

Vascular dementia can have many different symptoms, depending on the area of the brain affected.

Sometimes the early symptoms of vascular dementia may be similar to those of Alzheimer's disease, but they can also affect someone more physically and include problems with walking, moving and speech.

The first symptoms of vascular dementia usually appear gradually but can develop suddenly depending on the cause.

Symptoms of vascular dementia can include:

- **Memory problems** that affect your everyday life.
- **Becoming slower in thinking.**
- **Disorientation** and feeling lost in familiar surroundings.
- **Communication problems** such as slow or slurred speech.
- **Problems with bladder control.**
- **Personality changes**, including depression and losing interest in daily activities.
- **Difficulty with walking**, shuffling feet, and loss of balance.



Dementia with Lewy bodies

Dementia with Lewy bodies (also known as DLB or Lewy body dementia) is thought to affect about 125,000 people in the UK.

Symptoms of DLB can include:

- **Changes in attention, alertness, and level of confusion.** These variations can be very noticeable from day to day or even hour to hour.
- **Parkinson's type symptoms**, like slowing or difficulty walking, stiffness in the arms and legs and sometimes shaking or trembling.
- **Visual hallucinations.** These can often involve seeing people or animals that are not really there.
- **Movements and talking during sleep**, including acting out dreams.
- **Fainting and falls** due to difficulties with balance.
- **Problems detecting smells.**
- **Symptoms similar to Alzheimer's**, including memory loss and disorientation.

Frontotemporal dementia

The term frontotemporal dementia (FTD) is used to describe a number of different diseases.

These include behavioural variant FTD and primary progressive aphasia, which affects speech and language. FTD is quite rare and most commonly affects people aged 45-64.

Symptoms of FTD can include:

- **Changes in emotions.** This may include a change in how people express their feelings towards others or a lack of understanding of other people's feelings.
- **Lack of interest.** People may become withdrawn or lose interest in looking after themselves, perhaps not maintaining their normal level of personal hygiene.
- **Inappropriate behaviour.** This might include making inappropriate jokes or being insensitive. Humour or sexual behaviour may change. Some people become impulsive or easily distracted.
- **Overeating** or changes in what people choose to eat.
- **People may develop unusual beliefs,** interests, or obsessions.
- **Difficulty with simple plans** and decisions.
- **Not being aware of changes** to their own personality or behaviour.
- **Decline in language and communication abilities.** For example, problems speaking or understanding words, repeating common words and phrases, or forgetting the meaning of words.
- **Difficulty recognising people** or knowing what everyday objects are for.
- **Movement problems,** including stiff or twitching muscles, muscle weakness and difficulty swallowing.

Diagnosing dementia, and which type of dementia someone has, is important. It will ensure that people can get the right support and treatments and can plan for the future.

The diseases that cause dementia can have different early symptoms, **but many overlap.**



How dementia progresses

The diseases that cause dementia mentioned in this booklet are all neurodegenerative diseases. This means that the symptoms get worse over time.

Everybody is unique and is affected in their own way. The speed of change varies from person to person and also between different diseases, but in most dementias, symptoms progress slowly over several years.

As dementia progresses:

- **Memory and thinking skills.** People find that their ability to remember, think and make decisions worsens.
- **Communication** and understanding words often becomes more difficult.
- **Behaviour and personality.** A person's behaviour may change, and some people can become withdrawn or depressed. Anxiety is also common.
- **Recognition.** People may have difficulty recognising household objects or familiar faces.
- **Restlessness.** Problems with sleeping and restlessness at night may occur.
- **Anger or agitation** can be common in the later stages of dementia.
- **Unsteadiness.** It is common for people to be unsteady on their feet and fall more often.
- **Extra help.** Gradually people require more help with daily activities like dressing, going to the toilet and eating.



Across the UK there are local services and support groups for people living with dementia and their carers. You can contact the organisations on page 20 to find out about support in your area.

Diagnosing dementia

Your doctor is the first person to contact if you are concerned about dementia symptoms.

If the doctor suspects dementia, you might be referred to a memory clinic or specialist doctor. These specialists include psychiatrists, geriatricians, neurologists, clinical psychologists, and memory nurses.



When you see a doctor or nurse, they will ask you about your symptoms and how they are affecting you. They may also speak with your partner or someone close to you about your symptoms. You will be asked some questions relating to your memory and may have a physical check-up.



There are a range of memory tests available, and you might have one or more of these during your assessment. As dementia gets worse over time, the tests may be repeated every six to 12 months to see if there have been any changes.



Other tests can help to diagnose the type of dementia someone may have. These can include:

- A brain scans such as an MRI or CT scan.
- A test called an EEG, which measures brain activity.
- A lumbar puncture (spinal tap). In a lumbar puncture, a needle is used to take a sample of fluid from the bottom of someone's spine.

All of these tests will help a specialist doctor find out the likely cause of a person's memory problems.

If you are assessed for the possibility of having Alzheimer's or another type of dementia, you can choose not to know the diagnosis. You can also decide who else can be told about your diagnosis if you choose not to know.

If you, or someone close to you, are given a diagnosis of dementia, you may have many questions about what to do next. You can ask your doctor about local services that can help you and your family. You may be entitled to benefits and other types of support.

What treatments and medications are available?

There are several treatments available to help with the symptoms of Alzheimer's disease. There are also treatments that may help with the symptoms of other dementias.

You can speak to your doctor for more information or request our booklet '**Treatments for dementia**'. Call us on **0300 111 5 111**, email infoline@alzheimersresearchuk.org or download a copy from our website, www.alzheimersresearchuk.org



What causes the diseases that lead to dementia?

The causes of dementia are not yet fully understood but research is making progress. Understanding the causes of dementia is essential for developing new treatments.

Alzheimer's disease

Scientists know that in Alzheimer's disease, two proteins build up abnormally in the brain. They are called amyloid and tau, which form clumps called 'plaques' and 'tangles'. These interfere with the way brain cells work and communicate with each other. The plaques are usually first seen in the area of the brain that makes new memories. A lot of research is focused on finding ways to stop the build-up of these proteins and protect brain cells from harm.

In people who develop Alzheimer's disease over the age of 65, what causes these proteins to build up is thought to be a complex mixture of our age, genetics, and lifestyles. Researchers are working hard to understand more about how these factors interact in the development of Alzheimer's.

Vascular dementia

Vascular dementia is caused by a reduction in blood flow to the brain. Blood carries essential oxygen and nutrients to the brain and without them brain cells die. The network of blood vessels that carries blood around the body is called the vascular system.

There are different types of vascular dementia that relate to the blood vessel damage causing the disease.

These are:

- **Stroke-related dementia** is a type of vascular dementia that happens after a stroke, when blood supply to a part of the brain is suddenly cut off. This may cause difficulties with moving, co-ordination, speech and sight. A stroke can also cause memory loss and problems with attention.
- **Multi-infarct dementia** is caused by a series of small strokes in the brain, which can happen without a person noticing. Doctors may refer to these as transient ischemic attacks (TIAs).
- **Subcortical vascular dementia** is caused by changes to very small blood vessels in the brain and is often referred to as small vessel disease. Over time, parts of the brain that are important for attention, memory and language become more and more damaged.

Dementia with Lewy bodies

In dementia with Lewy bodies there are small clumps of protein that build up inside brain cells. One of these proteins is called alpha-synuclein and the clumps it forms are called Lewy bodies. People with Parkinson's disease also have a build-up of Lewy bodies, in brain cells that control our movement. Some people with Parkinson's disease will also go on to develop dementia symptoms too.

The protein clumps damage the way brain cells work and communicate with each other. The brain cells affected by Lewy bodies control thinking, memory, and movement. Researchers are working hard to understand how the protein builds up and discover ways to stop it causing dementia.

Frontotemporal dementia

In frontotemporal dementia (FTD) there are a variety of abnormal proteins that build up in the brain including tau, TDP-43 and FUS. The brain cells affected are in areas called the frontal and temporal lobes. These areas control our personality, emotions, and behaviour, as well as our speech and understanding of language. The way that this build-up causes the symptoms of FTD is not yet fully understood and research is ongoing.



Does dementia run in the family?

Mostly, this is not the case. Our risk of developing dementia is determined by a complex mix of our age, lifestyle and whether we carry any risk genes.

Researchers have found over twenty different versions of genes associated with an altered risk of Alzheimer's, but many only have a small effect on risk.

Some research has suggested that if you have a parent or grandparent who developed Alzheimer's disease over the age of 65 then your risk of developing the disease may be slightly higher than someone with no family history.

If you have several close relatives who have developed dementia under the age of 65, then it is possible the disease could be an inherited type. Certain types of early-onset Alzheimer's and frontotemporal dementia can run in families and often start in the 30s, 40s or 50s. These types of dementia are very rare.

If you would like to find out more about genetics and risk, you can request our booklet '**Genes and dementia**'.

All about risk

Alzheimer's and other causes of dementia are complex diseases. A mixture of our age, genes and lifestyle contribute to our risk of developing dementia.

A risk factor is anything that can increase your likelihood of developing dementia. Some risk factors for dementia we can influence, like our diet and the amount we exercise. Other risk factors we cannot change, like our age and our genes.

The chances of developing most types of dementia increase with age. This means as we get older, we are more likely to develop the condition. One or two in every 100 people aged 65 to 69 years have dementia, but this figure rises to one in five for those aged 85 to 89.

However, developing dementia is not an inevitable or normal part of getting older. We cannot change our age and there is currently no way we can completely prevent dementia, but there are some simple things we can all do that might help lower.

Some studies suggest that enjoying an active social life, with lots of interests and hobbies, might be beneficial. Other researchers have found that spending more time in education is associated with a lower dementia risk.

There is currently not enough evidence to suggest that omega-3 fish oil or vitamin supplements could reduce the risk of dementia. NSAIDs (non-steroidal anti-inflammatory drugs like aspirin or ibuprofen), HRT (hormone replacement therapy) and statins have not yet been found to protect against dementia, but research is continuing in this area. You should talk to your doctor before taking any supplements or drugs that claim to prevent dementia, as most are unproven, and can have serious side-effects.

You might read or hear about other risk factors for dementia. Despite occasional publicity, research has shown that flu vaccines, exposure to aluminium and living close to power lines are not risk factors for dementia. There is also no firm evidence that turmeric, ginkgo biloba, ginseng or coffee can protect against dementia.

You can reduce your risk of dementia and keep your brain healthy by:



Don't
smoke



Control
high blood
pressure



Only drink
alcohol within
recommended
limits



Maintain a
healthy weight



Keep cholesterol
at a healthy
level



Be active
and exercise
regularly



Eat a healthy, balanced
diet with lots of fruit and
vegetables, low amounts of
saturated fats and limiting
sugary and processed foods



Control blood
glucose if you
have diabetes

For further information contact us for our
free **'Reducing your risk of dementia'** booklet.

Support for people affected by dementia

Dementia has a huge impact on someone's life, as well as on their family and carers. Accessing services and support can make a positive difference to those affected by dementia.

Some services will be provided by local authorities and others can be arranged through the doctor, or you can contact your local authority social services directly. The number will be in the phone book and on your local council website. Everyone with dementia is entitled to an assessment that establishes their support needs and suggests how those needs can be met.

The following organisations provide information, support and care services to people affected by dementia as well as their families and carers. For more information contact us for our booklet, 'Support for people affected by dementia: organisations that can help'.

The **Admiral Nurse Dementia Helpline** is supported by the charity Dementia UK. It offers practical and medical advice and emotional support to people affected by dementia on **0800 888 6678**.

The **Age UK advice line, 0800 055 6112**, can give you information about help available through social services, as well as advice about other issues faced by older people.

Alzheimer Scotland provides the **National Dementia Helpline, 0808 808 3000**, in Scotland as well as local services all over Scotland for people with dementia and their families.

Alzheimer's Society's Dementia Connect service for England, Wales, and Northern Ireland. They provide information, support, guidance, and signposting to local support services. You can contact them on **0333 150 3456**.

The Carers Trust works to improve support, services, and recognition for anyone living with the challenges of unpaid caring for a family member. Contact them on **0300 772 9600**.

Carers UK offers advice and information to carers through booklets, factsheets and their website. Their **Adviceline** can be contacted on **0808 808 7777**.



The **Lewy Body Society** provides support and advice to people with dementia with Lewy bodies, their families and carers. You can contact them on **01942 914 000**.

The **NHS** provides free, confidential information and advice for carers through **Carers Direct** on **0300 123 1053**.

Parkinson's UK provides support and advice to people with Parkinson's disease, and dementia with Lewy bodies. They also have specialist nurses who can provide medical information. You can contact a helpline advisor on **0808 138 6593**.

Rare Dementia Support runs specialist support services for people living with, or affected by, five rare dementias:

- **frontotemporal dementia (FTD)**
- **posterior cortical atrophy (PCA)**
- **primary progressive aphasia (PPA)**
- **familial Alzheimer's disease (FAD)**
- **familial frontotemporal dementia (fFTD)**.

They run regular support group meetings and telephone and email support, information, and advice. Call **020 3325 0828** or email **contact@raredementiasupport.org**

How to get involved in research

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 over **£159 million** of research into the causes, diagnosis, prevention, and treatment of the diseases that cause dementia.

We believe that medical research will deliver life-changing preventions and treatments, and better ways to detect and diagnose the diseases that cause dementia.

Backed by our passionate scientists and supporters, we're challenging the way people think about dementia, bringing together the people and organisations who can speed up progress, and investing in research to make breakthroughs possible.

You can find out more about our research here
www.alzheimersresearchuk.org/research-projects

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

info@alzheimersresearchuk.org

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3 Riverside, Granta Park, Cambridge CB21 6AD

Visit

www.alzheimersresearchuk.org/dementia-information

Order

www.alzheimersresearchuk.org/supporter-orders

Or scan the QR code



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Research
UK**

Make
breakthroughs
possible



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