

Understanding the many symptoms of Parkinson's and how to spot it

Parkinson's is the fastest-growing neurological condition in the world. Around 145,000 people in the UK have the condition, but everyone's experience is different due to there being more than 40 symptoms.

Parkinson's is a progressive neurological condition and there is currently no cure. The condition develops when nerve cells — that are responsible for producing the chemical dopamine — die.

Dopamine allows messages to be sent to the parts of the brain that coordinate movement. With the loss of dopamine-producing nerve cells, these parts of the brain are unable to work normally, causing symptoms of Parkinson's to appear. As dopamine levels continue to fall, existing symptoms will further develop, and new symptoms will appear.

Symptoms of Parkinson's

The three most recognised symptoms of Parkinson's are a tremor (shaking), slowness of movement and rigidity or muscle stiffness. However, there are over 40 symptoms, and how they first present themselves can vary from person to person.

Someone might start having balance or coordination problems. They could lose their sense of smell or experience gait changes, where they lean forward slightly or shuffle when walking. Other people have fixed facial expressions (or a 'mask') due to changes in the nerves

that control their facial muscles. They might struggle with low mood and fatigue, or their handwriting could become smaller and difficult to read. Insomnia, apathy and anxiety can also be early signs of Parkinson's.

What treatments are available?

There's currently no cure for Parkinson's; but medication, physical activity and physiotherapy, speech and language therapy and occupational therapy can all be used to manage symptoms.

Deep brain stimulation (DBS) is a type of surgery that people may be offered if drug treatments become less effective at easing movement symptoms. It doesn't stop Parkinson's from progressing, but in many cases, it gives people with the condition better control of their motor symptoms.

Everyone's Parkinson's is unique, so different treatment combinations will suit different people. Anyone concerned that they may have Parkinson's should see their GP. Getting information about the condition and finding support can be a huge help for people who are diagnosed.



Support is available for everyone affected by Parkinson's on the Parkinson's UK website: parkinsons.org.uk and via the free, confidential helpline (0800 800 0303) and online forum.



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Finding the right support at the different stages of dementia

A dementia specialist nurse charity has published guidance to help families understand the three stages of dementia.

There are over 200 different types of dementia — all of which can present in various ways and can be difficult to identify and diagnose in the early stages.

What is dementia?

Dementia is an umbrella term for a range of conditions affecting the brain, which gradually worsen over time. As dementia progresses, it can affect a person's thinking, behaviour

and understanding of the world. This may happen quickly or slowly, depending on a variety of factors including the type of dementia, the person's age, their general health and their lifestyle. It can be helpful to think of dementia progressing in three stages: early, middle and late stages. However, the condition will affect everyone differently.

What are the different stages of dementia?

Early-stage dementia occurs when a person begins to show early symptoms. For many people, this stage will last for months or years. In some, rare cases, it may progress much quicker. A person at this stage might experience mild difficulties with memory and concentration, language and communication and decision-making.

In the middle stage of dementia, symptoms become more pronounced

and can have a bigger impact on daily life. Changes that might occur include difficulty getting to sleep, restlessness with the inability to sit still and sundowning —

a state of intense anxiety that typically occurs around sunset. In the late stage of dementia, changes can become more pronounced to the point that a person is unable to live independently. They may require longer-term support such as

live-in care from professional carers or residential care. Seeing significant changes in someone you care for can be upsetting for family and friends, and making decisions about long-term care can cause feelings of guilt and loss.

What support is available to families with dementia?

Dr Hilda Hayo, Chief Admiral Nurse and Chief Executive at Dementia UK says: "We understand the complex challenges associated with a diagnosis of dementia and how the condition may change through stages over time. Every time a diagnosis of dementia is made, it is life-changing for the person and their family; and it can be difficult to know where to turn to for support. Our Admiral Nurses are best placed to deliver specialist support to families navigating the different stages of the condition. They can offer practical and emotional guidance for the whole family."



Seeing significant changes in someone you care for can be upsetting for family and friends, and making decisions about long-term care can cause feelings of guilt and loss.



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If you need advice or support around dementia, you can visit dementiauk.org/get-support for information resources and find out how to access Dementia UK's Admiral Nurse Dementia Helpline and Clinics services.

Alzheimer's research embraces the benefits of the digital world

Virtual clinical trials (VCTs) are an exciting development in cognitive research. Certain tests needed for clinical or academic studies are taken out of the clinic and brought into participants' homes.



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Digital cognitive assessments are changing how we conduct Alzheimer's studies. Cognitive tests are used in clinical and research studies to understand a participant's brain function.

Making clinical trials virtual

Digital cognitive tests can be completed at home on tablets, computers and even smartphones. They can be taken daily or weekly, delivering a more realistic picture of changes over time.

Digital cognitive assessments have been available for over 30 years and are now widely used in healthcare research. However, at first, there was

reluctance to adopt them in clinical studies over concerns that older people may prefer a paper version of the test. However, when an Australian study compared digital with paper methods of assessing cognitive health in participants aged 55–96 years, they reported that 54.3% of participants preferred the computerised cognitive assessments.¹

Important tool for Alzheimer's research

Drugs targeting Alzheimer's are thought to be most effective early in the course of the disease when symptoms are very subtle or even absent in standard assessments. Therefore, enrolling people in the earliest stages of Alzheimer's in trials

is a priority to help find a cure. This is where digital assessments offer promise, as they can detect and monitor the earliest stages of the disease. An example is CANTAB™ Paired Associates Learning (PAL), which tests episodic memory. In PAL, different images flash up in boxes on the screen. One image then appears in the middle of the screen, and the participant must select the box that conceals the same shape. Research has shown that PAL activates areas of the brain involved early in the course of Alzheimer's disease.

Another exciting, new development is the use of voice to understand early cognitive changes. Voice analysis technology such as NeuroVocalix™ uses machine learning techniques to identify subtle changes in speech which may indicate early cognitive decline.

Greater patient benefit

The most exciting thing about virtual clinical trials is the benefit to patients and their carers. At-home testing enables greater accessibility as people who find leaving home difficult can still participate in this important aspect of the research process. It's wonderful to see the clinical and research world embracing this opportunity for people wishing to participate in Alzheimer's studies.

References

1. Earl, J. K., Gerrans, P., & Hunter, M. (2017). Better ways of assessing cognitive health. Brisbane: National Seniors.

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