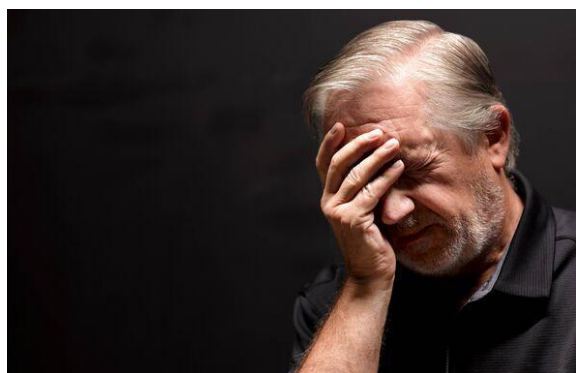


People who display one 'clogged drains' sign may be at a higher Alzheimer's risk

Scientists believe they may have identified a potential early warning sign of Alzheimer's disease visible on routine MRI scans.



Alzheimer's disease is the most common form of dementia (Image: Peter Dazeley via Getty Images)

By Lauren Haughey

A condition causing 'clogged drains' in the brain could be an early [warning sign of dementia](#), according to new research. Scientists believe they can now identify these blockages through standard MRI scans, potentially enhancing current methods for early [Alzheimer's detection](#).

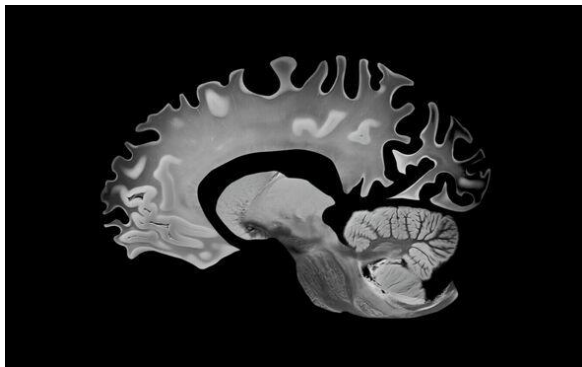
The [study](#), carried out by [Nanyang Technological University in Singapore](#), involved nearly 1,000 participants from a variety of ethnic backgrounds. Participants underwent comprehensive assessments and were categorised as having 'normal' cognitive function, 'subjective' cognitive decline, or mild cognitive impairment. Their [MRI scans](#), blood samples and other data were then analysed.

Overall, the researchers discovered that people with [mild cognitive impairment](#) tend to have more 'enlarged perivascular spaces' (EPVS) than other participants. This condition refers to fluid-filled cavities that surround small blood vessels, becoming larger than normal, making them visible on an MRI.

The team now believes that EPVS - or 'clogged drains' - is a probable early sign of [Alzheimer's disease](#), the most common type of dementia. Associate Professor

Nagaendran Kandiah, from NTU's Lee Kong Chian School of Medicine, [said](#): "Since these brain anomalies can be visually identified on routine magnetic resonance imaging (MRI) scans performed to evaluate cognitive decline, identifying them could complement existing methods to detect Alzheimer's earlier, without having to do and pay for additional tests."

Blood vessels in the brain are surrounded by spaces called perivascular spaces, which help drain and clear toxic waste, including beta amyloid and tau proteins. These waste products are present in greater amounts in Alzheimer's patients.



The new study involved nearly 1,000 participants (stock image) (Image: Getty)

When these drains become blocked because the brain's waste-clearing system isn't working correctly, they form enlarged perivascular spaces that can be seen on MRI scans. Nevertheless, it previously seemed unclear whether this condition was also linked to dementia, especially Alzheimer's disease.

Following their latest discoveries, researchers are now hopeful that doctors can improve patient care and possibly delay the progression of the disease in its early stages before irreversible brain damage occurs.

Should future studies validate the link between blocked drains and Alzheimer's across different groups, spotting EPVS could eventually form part of the arsenal used to forecast Alzheimer's development at an earlier point.

Associate Professor Kandiah continued: "The findings carry substantial clinical implications. Although white matter damage is more widely used in clinical practice to evaluate for dementia, as it is easily recognised on MRI scans, our results suggest that enlarged perivascular spaces may hold unique value in detecting early signs of Alzheimer's disease."



NHS figures indicate that over 944,000 people in the UK have dementia (Image: Getty)

What is Alzheimer's disease?

According to [NHS](#) data, over 944,000 people in the UK are living with dementia, including one in every 11 people aged over 65. The [World Health Organisation](#) states that Alzheimer's disease is the most common form of dementia, accounting for approximately 60 to 70% of all cases.

The precise cause of Alzheimer's remains a mystery, but there are several known risk factors. These include:

- Lifestyle factors and conditions associated with cardiovascular disease
- Increasing age (but dementia is not a 'normal' part of ageing)
- Family history of the condition
- Untreated depression

Alzheimer's is a progressive disease, which means its symptoms slowly develop over many years. The first signs usually involve minor memory problems, such as forgetting names or conversations.

As the disease progresses, the NHS warns that other symptoms may emerge:

- Hallucinations
- Difficulties with communication, speech or language
- Trouble making decisions
- Confusion, disorientation or getting lost in familiar places
- Low moods and anxiety
- Behavioural changes - increasing aggression or suspicion
- Problems moving around without assistance

Advice from the [NHS](#) adds: "There's currently no cure for Alzheimer's disease, but medicines are available that can help relieve some of the symptoms. Various other types of support are also available to help people with Alzheimer's live as independently

as possible, such as making changes to your home environment so it's easier to move around and remember daily tasks.

"Psychological treatments such as cognitive stimulation therapy may also be offered to help support your memory, problem-solving skills and language ability."

If you believe you are experiencing symptoms of Alzheimer's disease, it is recommended to consult your GP. Further information can be found on the [NHS website](#).

<https://www.express.co.uk/news/uk/2136315/People-clogged-drains-sign-higher-Alzheimer-s-risk>