



## One in three cases of dementia 'could be prevented' by targeting nine key risk factors

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[ [Original article in Nursing Times](#) ]

One in three cases of dementia could potentially be prevented if brain health is improved throughout life by targeting nine risk factors, according to researchers.

The risk factors identified as key include continuing education in early life, reducing hearing loss in mid-life, and reducing smoking in later life.

The findings come from a review set up by The Lancet journal involving 24 scientists from organisations from around the world, including UK universities and the NHS.

The Lancet Commission on dementia prevention, intervention, and care aimed to review the best available evidence and produce recommendations on how to best manage, or even prevent, the dementia epidemic.

For the first time, researchers modelled the impact of risk factors at all stages of life, and quantifies the potential contribution of hearing loss and social isolation as risk factors for dementia.

They concluded: 'Dementia is not an inevitable consequence of ageing and the Commission identifies nine potentially modifiable health and lifestyle factors from different phases of life that, if eliminated, might prevent dementia.'

Their review focused on nine factors at various stages in life, including staying in education until over the age of 15, reducing high blood pressure, obesity and hearing loss in mid-life (45-65 years old), and reducing smoking, depression, physical inactivity, social isolation and diabetes in later life (over 65 years old).

The researchers estimated that fully eliminating all of these factors could prevent 35% of cases of dementia. In contrast, finding a way to target the major genetic risk factor - the apolipoprotein E (ApoE) ɛ4 allele - would prevent only 7% of cases.

Of the 35% of all dementia cases that could potentially be prevented, the three most common risk factors that could be targeted were increasing education in early life, reducing hearing loss in mid-life and stopping smoking in later life.

The breakdown of how the 35% of cases could be prevented by the nine factors is as follows:

- Early life education contributes - 8%
- Mid-life hearing loss - 9%
- Mid-life high blood pressure - 2%
- Mid-life obesity - 1%
- Later life smoking - 5%
- Later life depression - 4%
- Later life physical inactivity - 3%
- Later life social isolation - 2%
- Later life diabetes - 1%

The report authors highlighted that not completing secondary education in early life may raise dementia risk by reducing cognitive reserve - a resilience to cognitive decline caused by the brain strengthening its networks and therefore continuing functioning in later life despite damage.

[ *article continues below infographic* ]

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Preserving hearing in mid-life may also help people to experience a cognitively rich environment and build cognitive reserve, said the authors, though they noted research was at an early stage.

Meanwhile, in later life, they said stopping smoking would be important to reduce exposure to neurotoxins, and improve cardiovascular health which, in turn, affects brain health.

The authors acknowledged some limitations with their estimates, for example, that they did not take into account diet and alcohol intake, and that global data was not available for all of the risk factors.

Lead author Professor Gill Livingston, from University College London, said: 'Acting now will vastly improve life for people with dementia and their families, and in doing so, will transform the future of society.'

'Although dementia is diagnosed in later life, the brain changes usually begin to develop years before, with risk factors for developing the disease occurring throughout life, not just in old age,' she said.

'We believe that a broader approach to prevention of dementia which reflects these changing risk factors will benefit our ageing societies and help to prevent the rising number of dementia cases globally,' she added.

Writing a linked comment in the journal, Professor Martin Prince, from King's College London, said: 'Dementia selectively affects the old

and frail, women, and the socioeconomically and educationally disadvantaged. It dims the voices of those living with the condition, just when they most need to be heard.'

As well as being published in The Lancet, the findings of the review were presented earlier today at the Alzheimer's Association International Conference 2017 in London.

UK organisations taking part included Camden and Islington NHS Foundation Trust, the National Hospital for Neurology and Neurosurgery, University College London, King's College London, the University of Exeter, the University of Sussex, the University of Manchester and University of Edinburgh.

The commission was partnered by University College London, the Alzheimer's Society, UK, the Economic and Social Research Council, and Alzheimer's Research UK, which provided financial and practical help.

Professor Helen Stokes-Lampard, chair of the Royal College of GPs, said: 'This research makes a compelling case for doing what we can throughout our lives to prevent or delay the onset of dementia, even if just for a few years.'

'It is clear that maintaining optimal physical and mental health and wellbeing is key, which stresses the importance of having a properly funded general practice service, and wider NHS,' she said. 'But also for having appropriate services in the community, such as smoking cessation services, schemes to promote physical activity, and services that could help stave off social isolation.'

### More information

- Read the original article in the [Nursing Times](#)
- Find out about the local services available to help in our [Dementia](#) and [Reducing the risk of dementia](#) pages


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