# Understanding dementia: Researcher shares personal journey and groundbreaking blood tests



Dementia remains the leading cause of death in the UK, with personal accounts highlighting its profound impact on families. Tim Spector, a prominent researcher and author, has shared his journey through the challenges of this condition after observing the decline of his 92-year-old mother, June, who was diagnosed with dementia seven years ago. Following a stroke that exacerbated her symptoms, Spector's mother no longer recognises him, prompting his concern about the potential hereditary nature of the disease and inspiring his commitment to understanding how diet can improve health outcomes.

Recent research from the Lancet Commission indicates that 45% of dementia cases can potentially be prevented by addressing 14 modifiable lifestyle risk factors, including diet, physical activity, high blood pressure, and obesity. Yet, Spector noted that genetics also play a critical role, leaving him to contemplate his risk despite a healthy lifestyle.

Traditionally, diagnosing dementia has relied on invasive and costly procedures, such as brain PET scans or cerebrospinal fluid analyses, with only 2% of dementia patients receiving these evaluations. The typical approach involves cognitive testing when symptoms are evident, making early intervention difficult. However, the advent of innovative blood tests could shift the diagnostic landscape dramatically.

Cited in The Times, Spector reported that revolutionary blood tests, currently available in the US and undergoing trials in the UK through the Blood Biomarker Challenge – a multimillion-pound initiative involving researchers from the University of Oxford, University of Cambridge, and University College London – might enable earlier detection of dementia. While these tests do not offer a standalone diagnosis, they combine with clinical assessments to indicate the likely presence of dementia and its specific type.

Spector experienced one of these blood tests at Viavi, a London clinic that is the first to offer such services privately in the UK. The tests include a finger-prick procedure priced at £1,000 which assesses the risk of Alzheimer’s disease through the biomarker pTau 217. More comprehensive testing, costing £1,800, checks for additional biomarkers like glial fibrillary acidic protein and neurofilament light.

Upon undergoing testing as a precautionary measure, Spector received promising news regarding his Alzheimer's risk, revealing no signs of Tau tangles and a genetic variant of the APOE4 gene associated with lower dementia risk. However, upon further extensive brain health screening, he was presented with concerning indications pointing to potential risk for vascular dementia, the second most prevalent dementia type and one his mother is likely to have.

Specifically, Spector's results indicated inflammation in his blood vessels, elevated lipid levels, and other metabolic indicators suggesting environmental factors might pose risks to cognitive health. Notably, Spector reported concerning markers linked to microplastics—a by-product of pollution and environmental toxins—highlighting how living in urban environments, such as London, may affect long-term brain health.

Dr Sabine Donnai, founder of Viavi, suggested that Spector’s brain health was further affected by lifestyle factors, including sleep patterns and alcohol consumption. She recommended modifications in his daily routine to help bolster his cognitive resilience and impede potential deterioration.

The challenges of identifying and addressing environmental and genetic risk factors in connection to dementia mark an ongoing area of research, with a particular focus on how early detection through blood tests could enable timely interventions for those at risk.

Professor Vanessa Raymont from the University of Oxford endorsed the potential of the pTau 217 biomarker, calling it one of the most promising indicators for Alzheimer’s detection. The hope exists that such tests could be accessible on the NHS within a few years, extending early identification to a broader population.

As research continues to unveil the connections between lifestyle, genetics, and dementia, the ongoing efforts aim to empower individuals with knowledge and strategies to mitigate their risks in the face of this debilitating condition.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://dementiastatistics.org/about-dementia/deaths/> - This URL supports the claim that dementia is the leading cause of death in the UK, providing statistics and information on dementia-related deaths.
* <https://www.alzheimersresearchuk.org/news/dementia-is-the-uks-biggest-killer-we-need-political-action-to-save-lives/> - This URL corroborates the impact of dementia in the UK, discussing its status as the leading cause of death and the need for political action.
* <https://www.alzheimers.org.uk/about-us/dementia-UK-leading-cause-of-death> - This URL provides further evidence that dementia has been the leading cause of death in the UK over the past decade, highlighting its importance in health and social care.
* <https://academic.oup.com/brain/article/142/11/3475/5858794> - Although the specific URL isn't available in the search results, research from The Lancet Commission on dementia prevention often aligns with the idea that modifiable risk factors can significantly impact dementia cases. You would need to find a specific Lancet Commission article or similar source to support this claim.
* [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31134-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2819%2931134-1/fulltext) - This URL links to a relevant study on dementia prevention that supports the claim about lifestyle risk factors, though it specifically might not mention all 14 factors directly.