# Emerging hopes in dementia treatment from repurposed medications



Dementia has emerged as the leading cause of death in the UK, surpassing fatalities from heart attacks and strokes combined. Despite substantial investments and years of rigorous research, the scientific community has yet to identify a definitive cure or effective preventative medication for this debilitating condition.

Recent developments have sparked renewed interest in the potential of existing medications to combat dementia. Notable among the advancements is donanemab, a drug that demonstrated promise in delaying the progression of symptoms in early Alzheimer's patients. A similar medication, lecanemab, showed comparable efficacy. However, significant side effects—that included brain bleeds in approximately one-third of donanemab patients—along with a prohibitive cost of £60,000 for an 18-month treatment course have precluded approval for use within the National Health Service (NHS).

A shift in focus towards the repurposing of established, low-cost drugs, such as aspirin and statins, offers fresh hope in addressing dementia. This concept gained prominence following the release of findings from a comprehensive seven-year study, which indicated that individuals vaccinated with Zostavax, a shingles vaccine, exhibited a 20 per cent lower risk of developing dementia. This was reported in the journal *Nature*. A similar effect was identified with another shingles vaccine, Shingrix, in research conducted by Oxford University.

The underlying rationale suggests that these vaccines may prevent the reactivation of the herpes zoster virus—responsible for shingles—thereby reducing inflammation within the nervous system which is believed to heighten dementia risk. At an estimated £200 for a shingles vaccination, researchers argue this presents an accessible option for potentially reducing future dementia cases.

In tandem, a recent study emerging from Hallym University College of Medicine in South Korea indicated that statins, which are commonly used by approximately eight million individuals in the UK to manage cholesterol levels, may lower the risk of Alzheimer’s disease by 28 per cent. Researchers tracked a cohort of more than half a million subjects, discovering that those who effectively lowered their harmful cholesterol levels through statin use had a decreased likelihood of developing dementia. High cholesterol has previously been associated with an increased risk of dementia, likely due to its inflammatory impact on blood vessels that impair cerebral blood flow.

Additionally, over-the-counter painkillers such as aspirin and ibuprofen have also sparked interest, with recent findings from the *Journal of the American Geriatrics Society* suggesting these non-steroidal anti-inflammatory drugs might reduce dementia risks by as much as 20 per cent. The caveat noted by researchers is that these benefits may only arise from consistent use over more than two years, alongside the risks of developing stomach ulcers and internal bleeding.

Further investigations are being conducted into antihypertensive medications, specifically angiotensin-receptor blockers, which a 2023 study published in *JAMA Network Open* found to decrease dementia risk by nearly one-third. The mechanisms may involve improved blood flow to the brain or potentially mitigating harmful deposits associated with the condition.

Ozempic, a medication primarily designed for diabetes management but widely recognised for its weight-loss properties, has also come under scrutiny, with a study from Case Western Reserve University indicating a reduction in Alzheimer’s risk by two-thirds among diabetic patients. This effect is thought to stem from its ability to enhance insulin utilisation within the brain, which aids in lowering blood glucose levels.

Other potential candidates under investigation include metformin—another diabetes drug shown to protect against dementia—and even common antibiotics, which may help reduce inflammation. An unexpected contender, Viagra, has demonstrated a remarkable 44 per cent reduction in Alzheimer's risk when regularly taken, according to research from University College London. Its efficacy may be attributed to its ability to enhance blood flow by relaxing blood vessels in the brain.

Pat Kehoe, a professor of translational dementia research at Bristol University, remarked, "It’s entirely possible the next breakthrough in dementia treatment comes from repurposing an old drug." However, he cautioned that the profitability of these low-cost drugs poses a challenge for pharmaceutical companies in financing necessary trials. He noted, “We could be sitting on potential treatments—the problem is getting the funding to find out what they are.” This landscape presents both opportunities and obstacles as the medical community seeks to combat one of the most pressing health crises facing the UK today.

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

## Bibliography

1. <https://www.alzheimers.org.uk/about-us/dementia-UK-leading-cause-of-death> - This website corroborates that dementia is the UK's leading cause of death, emphasizing its impact as a terminal disease. It highlights the need for awareness and support.
2. <https://dementiastatistics.org/about-dementia/deaths/> - This source supports the claim that dementia is the leading cause of death in the UK, providing detailed statistics and comparisons with other conditions.
3. <https://www.alzheimersresearchuk.org/news/dementia-is-the-uks-biggest-killer-we-need-political-action-to-save-lives/> - This article emphasizes dementia's status as the UK's biggest killer and highlights the need for political action to address the issue.
4. <https://www.dementiauk.org/news/dementia-named-uk-leading-cause-of-death/> - This news piece confirms that dementia has been the leading cause of death in England and Wales for consecutive years, underscoring the urgency for support and healthcare adjustments.
5. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregistrationsummarytables/2022> - This source provides official data from the Office for National Statistics, confirming that dementia and Alzheimer's disease are leading causes of death in England and Wales.
6. <https://www.nature.com/articles/d41586-019-00638-z> - This is a Nature article, while not directly accessible here, it can support discussions around scientific advancements and research on conditions like dementia, including potential influences of vaccines.
7. <https://www.dailymail.co.uk/health/article-14610277/research-cheap-popular-drugs-dementia.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data