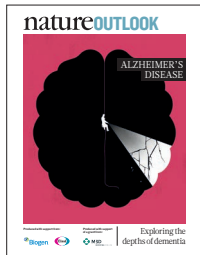


natureOUTLOOK

ALZHEIMER'S DISEASE

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Alzheimer's disease, the most common form of dementia, affects more than 50 million people worldwide. It robs people of their independence, and is the fifth leading cause of death. As the population grows and ages, the number of people who are touched by dementia — including those who provide billions of hours of unpaid care each year — will only rise (see page S2).

But despite decades of research, there are still no drugs that can slow the progression of Alzheimer's disease, let alone offer a cure. Promising preclinical results have repeatedly failed to translate into treatments for people. Some blame this on the animal models in which potential drugs are tested (S13). Others think that researchers' intense focus on the peptide amyloid- β might be misplaced. The hypothesis that amyloid- β deposits in the brain cause Alzheimer's disease is now under great pressure to deliver an effective therapy, and the desire to explore alternative approaches is growing (S4).

Such approaches include drugs that are designed to stop the spread of a different protein called tau (S16). And some doctors advocate eschewing pharmaceuticals entirely, in favour of behavioural interventions that improve quality of life (S8).

Diagnosing Alzheimer's disease has long been a challenge, but advances in imaging, and new biomarkers, are now enabling researchers to detect amyloid- β and tau deposits before symptoms arise, facilitating earlier intervention (S10).

The earliest intervention of all, of course, would be prevention. The idea that people could avoid this debilitating condition through simple changes in lifestyle remains the subject of debate, but evidence is building slowly (S18).

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Richard Hodson
Supplements editor

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