Could being a 'superager' prevent memory and thinking problems in later life?



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Research in the US published today (Friday 30 September) suggest that the brain cells of 'superagers' may hold the key to resisting memory and thinking problems later in life. The Journal of Neuroscience published the findings which suggest 'superagers' may also prevent tau build-up.

Researchers looked at the brains of 'superagers' – people over the age of 80 who show exceptional memory skills that is equal to people up to 30 years younger.

They focused on a specific area of the brain called the entorhinal cortex that plays a key role in memory and thinking abilities.

After death, people donated their brains so researchers could look at their brain cells, specifically their size, and whether or not they had build-up of the protein tau that is found in diseases that cause dementia.

Superagers brains investigated in this study came from the Northwestern University Alzheimer's Disease Research Center (ADRC) Brain Bank.

The brains investigated were split into four groups: six superagers, six younger people with healthy memory and thinking skills, seven age-matched people with average memory and thinking skills, and five people with a type of mild cognitive impairment.

Compared to all other groups in the study, superagers had

larger brain cells in their entorhinal cortex.

Superagers also had fewer tau tangles characteristic of Alzheimer's disease when compared to age-matched people.

Dr Rosa Sancho, Head of Research at Alzheimer's Research UK said:

"Problems with memory and thinking skills are early symptoms of Alzheimer's disease. Understanding more about the areas of the brain responsible for these skills could help develop new treatments. "This study, which involved a relatively small number of people, confirms the importance of an area of the brain called the entorhinal cortex, and found that participants who had much better memory and thinking skills later in life - so called 'superagers', appeared to have larger brain cells in this area. These larger brain cells also seemed to contain less tau protein build-up, which is toxic. Further research will need to uncover exactly what causes these superager brain cells to be larger and better protected. For example, is it a genetic feature superagers are born with, and if so what features? "This week's news that an Alzheimer's drug, lecanemab, showed a small but clear effect on memory decline, marked a historic moment for dementia research, and showed how research is bringing us closer to effective treatments. While researchers work to understand how to stop changes in the brain that cause dementia, there are small steps we can all take to keep our brains healthy as we age. Loving your heart, staying sharp and keeping connected with other people are three easy to follow rules and you can find out more by visiting www.thinkbrainhealth.org.uk."

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