

Levels of iron could be linked to progression to Alzheimer's disease, according to study

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Diagram of the brain of a person with Alzheimer's Disease. Credit: Wikipedia/public domain.

Higher levels of ferritin, an iron storage protein, may be associated with the transition from mild cognitive impairment (MCI) to Alzheimer's disease, according to new research published today in *Nature Communications*.

Over a seven year period, researchers from the University of Melbourne monitored the [cognitive performance](#) of 91 cognitively normal individuals as well as 144 with mild cognitive impairment and 67 with Alzheimer's disease. The study, which looked at various outcomes, found that higher levels of ferritin in cerebrospinal fluid in those with

MCI were linked with an earlier conversion to Alzheimer's. The researchers also found that ferritin was strongly linked to presence of the gene ApoE4, the strongest known Alzheimer's disease risk gene.

Dr James Pickett, Head of Research at Alzheimer's Society said:

"Previous evidence suggests that an imbalance in iron in the brain may be linked to Alzheimer's disease. This interesting study adds to these findings. The study, using seven years worth of data, finds that [higher levels](#) of the iron storage protein ferritin may be associated with people with mild cognitive impairment going on to develop Alzheimer's disease earlier.

The biggest mistake we could make would be to take these results as meaning that a test for conversion from [mild cognitive impairment](#) to Alzheimer's disease is around the corner. It's not clear enough from this study whether iron levels could be used to predict this conversion with enough accuracy and we can't draw any conclusions about whether we might be able to use iron as a target for future treatments. We need to see much more research into areas such as this which is why Alzheimer's Society has pledged £100million for dementia research in the next ten years."

More information: "Ferritin levels in the cerebrospinal fluid predict Alzheimer's disease outcomes and are regulated by APOE" *Nature Communications* 6, Article number: 6760 [DOI: 10.1038/ncomms7760](https://doi.org/10.1038/ncomms7760)

Provided by Alzheimer's Society

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