

# Lifestyle changes prevent cognitive decline even in genetically susceptible individuals

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Enhanced lifestyle counselling prevents cognitive decline even in people who are carriers of the APOE4 gene, a common risk factor of Alzheimer's disease, according to a new study published in *JAMA Neurology*.

The two-year FINGER trial involved 60-77 year-old people living in Finland and with [risk factors](#) for memory disorders. The study participants were divided into two groups: one of the groups was given regular lifestyle counselling and the other enhanced lifestyle counselling. Enhanced counselling involved nutrition counselling, physical and cognitive exercises, and support in managing the risk of cardiovascular diseases.

Earlier findings from the FINGER trial have shown that the regular lifestyle counselling group had a significantly increased risk of cognitive and functional impairment compared to the [intervention](#) group, i.e. the group receiving enhanced counselling.

Now the researchers analysed whether the presence of the APOE4 gene affected the intervention results. The analysis included 1,109 persons of whom 362 were carriers of the APOE4 gene. The findings show that enhanced lifestyle counselling prevented [cognitive decline](#) despite the presence of the risk gene. Analyses carried out within the groups also indicate that the intervention results might even be better in carriers of the APOE4 gene.

"Many people worry that genetic risk factors for dementia may thwart potential benefits from healthy [lifestyle](#) changes. We were very happy to see that this was not the case in our intervention, which was started early, before the onset of substantial cognitive impairment," says Adjunct Professor Alina Solomon, the lead author of the study.

Professor Miia Kivipelto, the principal investigator of the FINGER trial, adds: "The FINGER intervention model is now being adapted and tested globally in the World Wide FINGERS initiative. New clinical [trials](#) in diverse populations with a variety of geographical and cultural backgrounds will help us formulate global dementia prevention strategies."

**More information:** Alina Solomon et al. Effect of the Apolipoprotein E Genotype on Cognitive Change During a Multidomain Lifestyle Intervention, *JAMA Neurology* (2018). [DOI: 10.1001/jamaneurol.2017.4365](#)

Provided by University of Eastern Finland

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