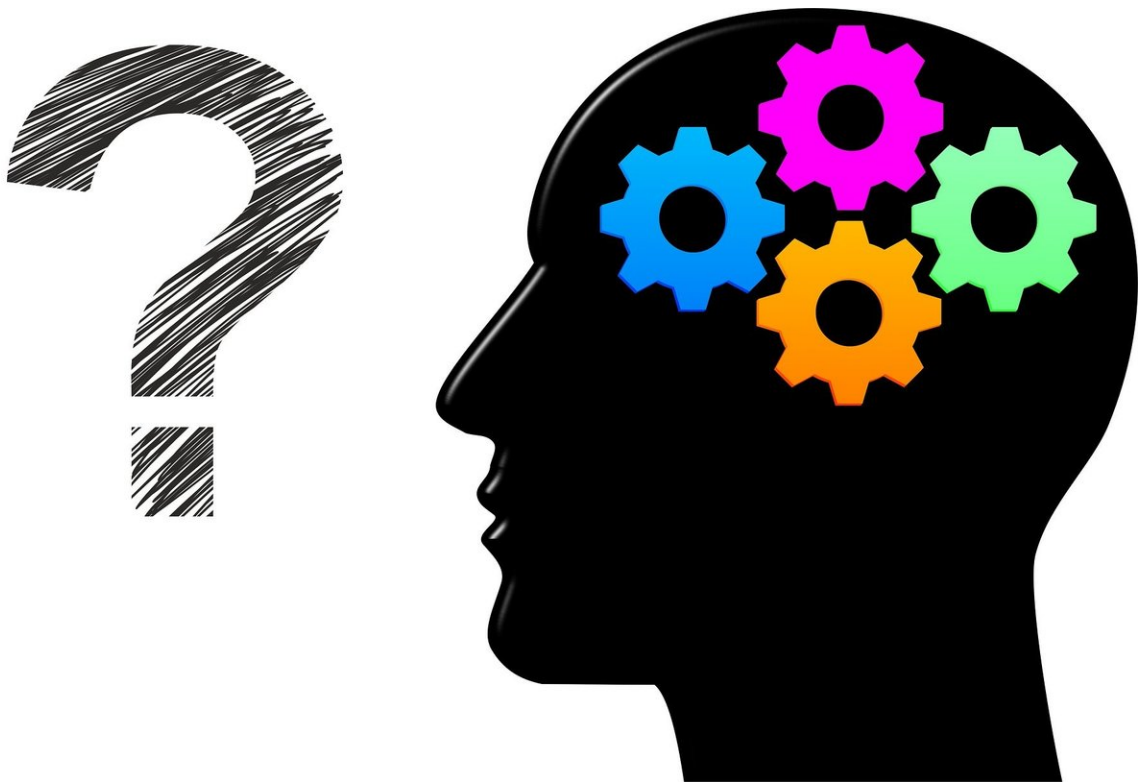


# New study finds link between subjective and objective memory decline

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Among people who report memory and thinking problems, some show no signs of a problem on standard tests, while others have subtle declines on their tests. A new study shows that people who have subtle problems with these tests may have an increased risk of developing mild cognitive

impairment, which can be a precursor to dementia. The study is published in *Neurology*.

"Several studies have found that people with subjective cognitive decline have an increased risk of dementia," said study author Michael Wagner, Ph.D., of the German Center for Neurodegenerative Diseases in Bonn. "Our results now suggest that people with subjective cognitive decline who also have minor test deficits, or early signs of memory and thinking problems not yet reaching the diagnosis of mild cognitive impairment, may be more likely to progress to memory disorders. Testing for these deficits in people with self-reported decline could help identify people at a higher risk for progressing to mild cognitive impairment."

The study involved 439 people with subjective cognitive decline with an average age of 71 who did not have dementia or mild cognitive impairment.

Participants completed a series of tests to assess thinking and memory skills. Tests included memorizing lists, copying a drawing, correctly identifying time frames and current location. Minor test deficits was defined as having a score of at least 0.5 standard deviations below the average score.

Mild cognitive impairment was diagnosed by a panel of researchers who reviewed each participant's performance across several tests. A test score of at least 1.5 standard deviations below the average was necessary for a diagnosis of mild cognitive impairment.

Of those with subjective cognitive decline, 13% (55 people) had minor test deficits at the start of the study and 87% (384 people) did not have the minor deficits. Then the participants were followed for an average of three years to see who developed mild cognitive impairment.

After adjusting for age and sex, researchers found that people with subjective cognitive decline who also had minor test deficits were more than four times more likely to progress to mild cognitive impairment compared to people without minor deficits.

Researchers found that among the people with subjective cognitive decline, 17% (58 people) who did not have minor deficits, and 48% (24 people), who did have minor deficits, progressed to mild cognitive impairment.

Researchers also found that people with subjective cognitive decline and minor test deficits had a 36% probability of developing mild cognitive impairment within two years and an estimated probability of 84% of developing [mild cognitive impairment](#) within four years.

They also found that people with subjective cognitive decline and minor test deficits had higher levels of biomarkers measuring protein changes in the brain, indicating an increased risk of Alzheimer's disease.

"Our results shed new light on the link between subjective and objective decline before being diagnosed with Alzheimer's dementia," said Wagner. "Future research may help doctors to measure and communicate individual risk for people with [subjective cognitive decline](#)."

A limitation of the study was that it only included people of European ancestry, so it may not be generalizable to people from other populations.

**More information:** Melina Stark et al, Relevance of Minor Neuropsychological Deficits in Patients With Subjective Cognitive Decline, *Neurology* (2023). DOI: 10.1212/WNL.0000000000207844 . [dx.doi.org/10.1212/WNL.0000000000207844](https://doi.org/10.1212/WNL.0000000000207844)

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