

Research finds that social isolation is directly associated with later dementia

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Social isolation is linked to lower brain volume in areas related to cognition and a higher risk of dementia, according to research published in the June 8, 2022, online issue of *Neurology*. The study found that social isolation was linked to a 26% increased risk of dementia, separately from risk factors like depression and loneliness.

"Social isolation is a serious yet underrecognized [public health problem](#) that is often associated with old age," said study author Jianfeng Feng, Ph.D., of Fudan University in Shanghai, China. "In the context of the COVID-19 pandemic, social isolation, or the state of being cut off from social networks, has intensified. It's more important than ever to identify people who are socially isolated and provide resources to help them make connections in their community."

The study looked at 462,619 people across the United Kingdom with an average age of 57 at the beginning of the study who were followed for nearly 12 years before the pandemic. Of those, 41,886, or 9% of people reported being socially isolated, and 29,036, or 6% of people felt lonely.

During the study, 4,998 developed dementia.

Researchers collected survey data from participants, along with a variety of physical and biological measurements, including MRI data. Participants also took thinking and memory tests to assess their cognitive function. For social isolation, people were asked three questions about [social contact](#): whether they lived with others; whether they had visits with friends or family at least once a month; and whether they participated in [social activities](#) such as clubs, meetings or volunteer work at least once a week. People were considered socially isolated if they answered no to at least two questions.

Of the 41,886 people with social isolation, 649 people developed dementia, or 1.55%, compared to 4,349 people of the 420,733 people who were not socially isolated or 1.03%.

After adjusting for factors including age, sex, [socioeconomic status](#), alcohol intake and smoking, and other conditions like depression and loneliness, researchers found that socially isolated individuals had lower volume in the brain's gray matter in various regions involved with learning and thinking. Researchers found that people who were socially isolated were 26% more likely to develop dementia than those with no social isolation. Researchers also looked at loneliness, but after adjusting, saw no strong correlation with developing dementia.

"People who reported high levels of social isolation had significant differences in [brain volume](#), also associated with cognition and dementia," said Feng. "Given the findings of this study, social isolation may be an early indicator of an increased risk of dementia."

People who reported higher levels of social isolation were more likely to have lower gray matter volume in areas of the brain associated with learning and thinking. Overall, the results showed

that lower gray matter volumes were associated with higher [social isolation](#).

A limitation of the study was that participants reported fewer health conditions and were less likely to live alone than the general population, so the results may not apply to the [general population](#). The study was a collaboration between Fudan University, the University of Cambridge and the University of Warwick.

More information: Associations of social isolation and loneliness with later dementia", *Neurology* (2022). DOI: [10.1212/WNL.0000000000200583](https://doi.org/10.1212/WNL.0000000000200583)

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