

# Long-term use of certain acid reflux drugs linked to higher risk of dementia

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People who take acid reflux medications called proton pump inhibitors for four-and-a-half years or more may have a higher risk of dementia compared to people who do not take these medications, according to new research published in *Neurology*. This study does not prove that acid reflux drugs cause dementia; it only shows an association.

Acid reflux is when stomach acid flows into the esophagus, usually after a meal or when lying down. People with [acid reflux](#) may experience heartburn and ulcers. People with frequent acid reflux may develop [gastroesophageal reflux disease](#), or GERD, which can lead to cancer of the esophagus.

Proton pump inhibitors reduce [stomach acid](#) by targeting the enzymes in the stomach lining that produce that acid.

"Proton pump inhibitors are a useful tool to help control acid reflux, however [long-term use](#) has been linked in previous studies to a higher risk of stroke, [bone fractures](#) and [chronic kidney disease](#)," said study author Kamakshi Lakshminarayan, MBBS, Ph.D., of the University of Minnesota School of Public Health in Minneapolis, and a member of the American Academy of Neurology.

"Still, some people take these drugs regularly, so we examined if they are linked to a higher risk of [dementia](#). While we did not find a link with short-term use, we did find a higher risk of dementia associated with long-term use of these drugs."

The study included 5,712 people, age 45 and older, who did not have dementia at the start of the study. They had an average age of 75.

Researchers determined if participants took acid reflux drugs by reviewing their medications during study visits and during yearly phone calls. Of the participants, 1,490 people, or 26%, had taken the drugs. Participants were then divided into four groups based on whether they had taken the drugs and for how long, as follows: people who did not take the drugs; those who took the drugs for up to 2.8 years; those who took them for 2.8 to 4.4 years; and people who took them for more than 4.4 years.

Participants were then followed for a median duration of 5.5 years. During this time, 585 people, or 10%, developed dementia.

Of the 4,222 people who did not take the drugs, 415 people developed dementia, or 19 cases per 1,000 person-years. Person-years represent both the number of people in the study and the amount of time each person spends in the study. Of the 497 people who took the drugs for more than 4.4 years, 58 people developed dementia, or 24 cases per 1,000 person years.

After adjusting for factors such as age, sex and race, as well as health-related factors such as [high blood pressure](#) and diabetes, researchers found people who had been taking acid reflux drugs for more than 4.4 years had a 33% higher risk of developing dementia than people who never took the drugs.

Researchers did not find a higher risk of dementia for people who took the drugs for fewer than 4.4 years.

"More research is needed to confirm our findings and explore reasons for the possible link between long-term proton pump inhibitor use and a higher risk of dementia," said Lakshminarayan.

"While there are various ways to treat acid reflux, such as taking antacids, maintaining a healthy weight, and avoiding late meals and certain foods, different approaches may not work for everyone. It is important that people taking these medications speak with their doctor before making any changes, to discuss the [best treatment](#) for them, and because stopping these drugs abruptly may result in worse symptoms."

A limitation of the study was that participants were asked once a year about medication use, so researchers estimated use between annual check-ins. If participants stopped and restarted acid reflux drugs in

between check-ins, estimation of their use may have been inaccurate. The authors were also unable to assess if participants took over the counter acid reflux drugs.

**More information:** Carin Northuis et al, Cumulative Use of Proton Pump Inhibitors and Risk of Dementia: The Atherosclerosis Risk in Communities Study, *Neurology* (2023). DOI: 10.1212/WNL.000000000000207747 , [dx.doi.org/10.1212/WNL.000000000000207747](https://doi.org/10.1212/WNL.000000000000207747)

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