

# Statins protect against heart disease in high-risk groups, new studies find

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Researchers from Brigham and Women's Hospital, a founding member of the Mass General Brigham health care system, have found that statins, the most prescribed class of drugs to treat high cholesterol, reduced the

risk of heart attack and stroke among two groups at high risk for heart disease: older adults with chronic kidney disease and those with and without frailty.

The results of the two new studies provide additional context to a longstanding debate among the [medical community](#) about whether there are benefits to initiating [statin use](#) in people who don't already have high cholesterol or [cardiovascular disease](#). The studies appear in the [JAMA Network Open](#) and the [Journal of the American Geriatrics Society](#).

"Statins are a first line class of drugs that can [lower cholesterol](#) and lower the risk of a second heart attack or stroke in people who have already had one- there's no question about that," said corresponding author Ariela Orkaby, MD, MPH, of the Brigham's Division of Aging.

"However, many clinicians still don't agree on whether [statins](#) should be used as a preventative treatment for people who haven't had a heart attack or stroke yet but are at high risk due to age or other factors. Our findings demonstrate statins have a protective effect even in people who haven't had their first major cardiac event, which means there are still benefits to prescribing these medications for primary prevention of [heart disease](#)."

For most people, statins are well-tolerated and don't have significant side effects. However, some doctors over the last few years have called for these medications to stop being prescribed for certain people, including those with [chronic kidney disease](#). Notably, cardiovascular [disease](#) is the leading cause of death for [older adults](#) with kidney disease.

"There has been some chatter about statins causing muscle pains but, for the vast majority of people, these are very safe and effective medications," said Orkaby. "The problem is that we're still missing a lot of clinical evidence about their effectiveness in certain groups, which

has made some doctors deprescribe statins out of caution."

In their study of 14,828 people with chronic kidney disease, the researchers found that starting statins was associated with 9% reduced mortality and a 4% lower risk of heart attack or stroke. The team also looked at a much larger group of older adults without kidney disease, of whom 12 percent were frail. Among this group of 710,313 people, they found that [statin](#) therapy was associated with a 39% lower risk of mortality and 14% lower risk of a first heart attack or stroke. Both studies used data from the Veteran's Affairs Health care System (VA).

Notably, the researchers found that these reductions in mortality and disease risk were independent of frailty, which the researchers measured through a score that accounted for dozens of age-related health conditions.

"When we're talking about the risk-benefit analysis of using a certain medication in older populations, we need to consider frailty because medications may not work as well or may cause more side effects in people who are frailer," said Orkaby. "Our results suggest that for statins, frailty status doesn't decrease benefit, and it may be the frailest older adults who benefit the most."

While the two studies benefited from the large patient population and long-term follow-up afforded by working with VA data, the researchers caution that their conclusions drawn from past patient data should be validated in new clinical trials that prospectively address these questions.

"We're still missing some of the evidence we need to fully understand the scope of what these medications do," said Orkaby. "However, these studies tell us that until we have [clinical data](#) that suggests otherwise, statins are safe and effective for older people and those with chronic kidney disease."

**More information:** Barayev, O. et al, Statins, mortality, and major adverse cardiovascular events among US veterans with chronic kidney disease, *JAMA Network Open*, [DOI: 10.1001/jamanetworkopen.2023.46373](https://doi.org/10.1001/jamanetworkopen.2023.46373)

Orkaby A. et al, New statin use, mortality and first cardiovascular events in older US veterans by frailty status, *Journal of the American Geriatrics Society*, [DOI: 10.1111/jgs.18700](https://doi.org/10.1111/jgs.18700). [agsjournals.onlinelibrary.wiley ... oi/10.1111/jgs.18700](https://agsjournals.onlinelibrary.wiley.com/doi/10.1111/jgs.18700)

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