

# Statins don't lower risk of pneumonia in elderly

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Taking popular cholesterol-lowering statin drugs, such as Lipitor (atorvastatin), does not lower the risk of pneumonia. That's the new finding from a study of more than 3,000 Group Health patients published online on June 16 in advance of the *British Medical Journal's* June 20 print issue.

"Prior research based on automated claims data had raised some hope—and maybe some hype—for statins as a way to prevent and treat infections including pneumonia," said Sascha Dublin, MD, PhD, a physician at [Group Health](#) and assistant investigator at Group Health Center for Health Studies. "But when we used medical records to get more detailed information about patients, our findings didn't support that approach."

In fact, Dublin's population-based case-control study found that pneumonia risk was, if anything, slightly higher (26%) in people using a statin than in those not using any; and this extra risk was even higher (61%) for pneumonia severe enough to require being hospitalized.

"As a doctor, I'm a fan of statins for what they've been proven to do: lowering cholesterol and risk of heart disease and stroke in people who've had either disease or are at risk for them," said Dublin. Statins are HMG coenzyme A reductase inhibitors, which also include Zocor® (simvastatin) and Mevacor® (lovastatin). This class of medications lessens inflammation, which plays a role in infections.

"But now we and some others have found that statins may have gotten some unearned credit for health benefits that they don't actually have, including preventing pneumonia," Dublin said.

Suggestions from prior research had led to calls for expensive randomized controlled trials of statins to prevent or treat infection. "But our study indicates that such trials would be an ill-advised use of limited research funds at this time," she added.

Why the discrepancy between this new study and earlier ones? "Healthy-user bias is one reason," said Dublin. In other words, compared to people who don't take statins, those who do may be healthier and have healthier habits that lower their risks of unrelated diseases such as pneumonia. And that's just what she found: Study patients who were on statins were less frail or disabled and also more likely to be vaccinated against flu or pneumococcal pneumonia. They were less likely to smoke, to have dementia, or to need help with bathing or walking.

Unlike the previous research on statins and pneumonia, Dublin's study made great efforts to control for this bias, including reviewing medical records in detail for every study subject. It confirmed that every pneumonia event was a true case of pneumonia, which prior studies rarely did. And it focused on relatively healthy elderly people. All had intact immune systems and none lived in a nursing home. She studied the same 65- to 94-year-old patients, with their records coded to protect their privacy, as in earlier Group Health research, published in *The Lancet* in 2008. That work showed the flu vaccine didn't protect the elderly from [pneumonia](#) as much as had been thought.

"We did an old-fashioned 'chart review,'" said Dublin. "By reading the text in the medical records, you catch crucial details."

Source: Group Health Cooperative Center for Health Studies

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