

Statin use in elderly would prevent disease but could carry considerable side effects

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Various pills. Credit: Wikipedia

A new study by UC San Francisco has found that statins can help prevent disease in older adults but must be weighed against potentially serious side effects.

Amid a projected cost of almost \$900 billion for cardiovascular disease over the next decade in the U.S., [statins](#) are used by nearly half the elderly population in the nation. But in spite of the widespread use, there has been little systematic scrutiny of the potential risks of the drugs in older adults and whether those [side effects](#) could offset cardiovascular and other health benefits.

For the statin study, the researchers used a computer simulation model

that explored whether statins should be routinely administered to adults 75 or older to prevent [heart disease](#).

They found a tenuous balance: on the one hand, the results showed "tremendous" potential [health benefits](#) to be gained including far fewer heart attacks. On the other hand, potential side effects that may have particular consequences in the elderly - including muscle pain and weakness or mild declines in cognitive function - could offset those gains.

The study will be published April 21, 2015 in *Annals of Internal Medicine*.

"There's been a lot of uncertainty over the use of statins in older adults," said senior author Kirsten Bibbins-Domingo, PhD, MD, a professor of medicine, epidemiology and biostatistics at UCSF. She is also director of the UCSF Center for Vulnerable Populations at San Francisco General Hospital and Trauma Center.

"Prior studies have favored statin use because of the clear benefits to the heart and because serious side effects are rare," said Bibbins-Domingo. "Unfortunately, we don't have enough studies in older adults, and as a result don't know enough about how common or how severe the side effects are. Our study showed that in older adults, even small increases in functional limitations and mild cognitive impairments from statin use could result in net harm."

An estimated 19 million adults 75 to 94 years old were living in the U.S., according to 2014 statistics, and of those 30 percent were diagnosed with cardiovascular disease, reported the study. Under current rates, older adults are projected to account for 2.5 million myocardial infarctions and 3.1 million deaths related to coronary heart disease over the next decade.

Statins are widely used to combat cardiovascular disease. Before patients embark on using them, typically they discuss the potential benefits and risks with their physicians. To help guide those decisions, researchers in the statin study sought to provide more precise and reliable data on the balance between benefits and harms.

They focused on two side effects that are particularly important to geriatric populations: functional limitations due to [muscle pain](#) and weakness and mild [cognitive impairment](#). "Both of these conditions are prevalent in older adults and can have substantial impact on quality of life and ability to live independently," the authors wrote.

The study was based on a simulation of all U.S. adults 75 to 94 years old, from 2014 through 2023. The researchers simulated the estimated impact of statin use for primary prevention, modeling the use of statins in all older adults without known heart disease.

In their findings, the authors estimated that if all adults in the U.S. 75 to 93 years old without [cardiovascular disease](#) were to take statins over the next decade, 105,000 heart attacks and 68,000 deaths would be prevented. Because statins are available as generics and relatively inexpensive, treating all older adults without heart disease would be cost effective, the author reported.

However, the cardiovascular benefits and cost effectiveness would be offset with even a modest increased risk - by 10 to 30 percent - of cognitive impairments or [functional limitations](#), caution the researchers.

They call for additional research to quantify both the potential benefits and harms of statin use in [older adults](#).

Provided by University of California, San Francisco

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