

Study indicates benefits to treating young adults with high cholesterol

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Treating young adults with high blood pressure and high cholesterol levels may reduce risk of future heart attacks and heart disease, according to researchers at UC San Francisco and Columbia University in a study published recently in *PLOS One*.

While current hypertension guidelines recommend treating [high blood pressure](#) in young adults, current cholesterol treatment guidelines effectively exclude treatment of young adults unless [low-density lipoprotein cholesterol](#) (LDL) is extremely high.

"Our study implies that current guidelines may not be ideal and that it might make sense to treat young adults with high cholesterol in order to prevent heart attacks later in life," said Mark Pletcher, MD, MPH, lead author on the paper and a professor in the UCSF Department of Epidemiology and Biostatistics. "It's hard to actually prove that this approach would work, though, because it would take 20 to 30 years to follow young adults into middle age and beyond to see if early adult treatment helps prevent events later in life."

The study used novel mixed-effects and random-effects modeling to estimate age-based risk factor trajectories for each study participant. The researchers estimated risk factor trajectories, starting at age 20, for all participants using blood pressure and cholesterol measurements collected over 40 years in the Framingham Offspring Study. They then estimated the average early adult (age 20-39) exposure to each risk factor and used the estimates to predict coronary heart disease events

after age 40, adjusting for risk factor exposure later in life.

The Framingham Offspring Study is a community-based cohort study comprised primarily of children of participants in the Framingham Heart Study Original Cohort. Participants have been followed since 1971 with continuous follow up for cardiovascular events.

Pletcher said further studies of other cohorts with different populations and using different methodologies are needed to confirm their findings.

"Then there will be hard decisions to make regarding statin therapy for [young adults](#)," he said. "Without evidence of effectiveness from randomized trials, we need to talk through the sometimes-unknown risks and benefits of early treatment of [high cholesterol](#) with our patients and engage in shared decision-making on this issue."

More information: Mark J. Pletcher et al. Young Adult Exposure to Cardiovascular Risk Factors and Risk of Events Later in Life: The Framingham Offspring Study, *PLOS ONE* (2016). [DOI: 10.1371/journal.pone.0154288](#)

Provided by University of California, San Francisco

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