

# US, European cholesterol guidelines differ in statin use recommendations

29 March 2014

Application of U.S. and European cholesterol guidelines to a European population found that proportions of individuals eligible for statins differed substantially, with one U.S. guideline recommending statins for nearly all men and two-thirds of women, proportions exceeding those of the other guidelines, according to a *JAMA* study released online to coincide with the 2014 American College of Cardiology Scientific Sessions.

The common approach in cardiovascular disease (CVD) primary prevention is to identify individuals at high enough risk to justify more intensive lifestyle interventions, [treatment](#) with medications, or both. The CVD prevention [guidelines](#) developed by the National Cholesterol Education Program expert panel, the American College of Cardiology/American Heart Association (ACC/AHA) task force, and the European Society of Cardiology (ESC) are the major guidelines influencing clinical practice. "Varying approaches to CVD risk estimation and application of different criteria for therapeutic recommendations would translate into substantial differences in proportions of individuals qualifying for treatment at a population level," the authors write.

Maryam Kavousi, M.D., Ph.D., of Erasmus MC-University Medical Center, Rotterdam, the Netherlands, and colleagues conducted a study to determine population-wide implications of the ACC/AHA, the Adult Treatment Panel III (ATP-III), and the ESC guidelines, using 4,854 Dutch participants from the Rotterdam Study (a population-based study of patients 55 years of age or older). The researchers calculated 10-year risks for "hard" (major) atherosclerotic [cardiovascular disease](#) (ASCVD) events (including fatal and nonfatal coronary heart disease [CHD] and stroke) (ACC/AHA); hard CHD events (fatal and nonfatal heart attack, CHD mortality) (ATP-III); and atherosclerotic CVD mortality (ESC). The proportions of individuals for whom [statins](#) would be recommended were calculated per guideline.

The average age of the participants was 65.5 years; 54.5 percent were women. The researchers found that application of the ACC/AHA guideline recommended treatment for 96.4 percent of men and 65.8 percent of women; for the ATP-III guideline, the portion was 52 percent of men and 35.5 percent of women; and for the ESC guideline, 66.1 percent of men and 39.1 percent of women were included in the category where treatment was recommended.

With the ACC/AHA approach, average predicted risk vs observed major ASCVD events was 21.5 percent vs 12.7 percent for men and 11.6 percent vs 7.9 percent for [women](#). Similar overestimation occurred with the ATP-III and ESC model.

"Improving risk predictions and setting appropriate population-wide thresholds are necessary to facilitate better clinical decision making," the authors conclude.

**More information:** [DOI: 10.1001/jama.2014.2632](https://doi.org/10.1001/jama.2014.2632)

Provided by The JAMA Network Journals

APA citation: US, European cholesterol guidelines differ in statin use recommendations (2014, March 29) retrieved 25 July 2022 from <https://medicalxpress.com/news/2014-03-european-cholesterol-guidelines-differ-statin.html>

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