

Scientists debate impact of removing guidelines for dietary cholesterol

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Recently the annual Dietary Guidelines Advisory Committee Report stated that cholesterol was "not a nutrient of concern for overconsumption."

Some people celebrated, expecting once again to fill their bellies with unlimited amounts of butter, cheese, sausage and steak. But several notable doctors and scientists balked - and even protested.

"The result has been a green light for people to eat unhealthful foods," said Neal D. Barnard, founding president of the Physicians Committee for Responsible Medicine, in his March 24 testimony before the advisory committee. "The committee made a scientific error on cholesterol, and to carry that mistake into the guidelines is not scientifically defensible and serves only to perpetuate confusion."

A conclusion that eating foods high in cholesterol like eggs will not affect [blood cholesterol levels](#) is flawed science, several critics have stated. Others raise concern that people will use that pronouncement as license to eat as much high-cholesterol foods as they want - all to the detriment of health.

Moreover, other components in foods containing cholesterol can pose health risks, including saturated fat, they said.

"Most of the members of the public don't differentiate between dietary cholesterol and blood cholesterol or the effects of dietary cholesterol

from the risk of foods that contain it," Dr. Barnard said in his testimony.

Michael Greger of NutritionFacts.com went a step further, stating that dietary cholesterol not only raises blood cholesterol but increases the risk of diabetes, cancers and liver disease, including nonalcoholic cirrhosis, cancer and hepatitis C.

Another problem, Dr. Greger testified, is that cholesterol is "correlated with other disease-promoting components in the same foods," such as saturated fat. Removing limits on cholesterol consumption will invite people "to consume foods that should be minimized in lieu of healthier food choices."

The U.S. Department of Agriculture updates science-based dietary guidelines every five years, with new guidelines expected later this year. The committee wants to overturn the 2010 guidelines recommending fewer than 300 milligrams a day of dietary cholesterol, with a national average of 340 milligrams. One egg yolk has about 185 milligrams.

Cholesterol occurs only in animal-based foods, with high concentrations in eggs, shellfish and organ meats including liver. While those foods don't contain high levels of saturated fat, certain cuts of beef (ribs), lamb and pork (chops), and whole-dairy products do contain elevated levels of cholesterol and saturated fat. The draft guidelines say that limiting saturated fat consumption "would further reduce the population level risk of cardiovascular disease."

So will saturated-fat consumption increase once limits on dietary cholesterol are removed?

Robert H. Eckel, professor at the University of Colorado School of Medicine and former American Health Association president, co-authored the 2013 AHA/American College of Cardiology evidence upon

which the committee based its decision to remove dietary-cholesterol limits. "The evidence we reviewed indicated that dietary cholesterol independent from the intake of saturated and trans fats alone caused no appreciable increase in blood cholesterol levels."

But he said the committee statement should include an asterisk to denote the need for definitive studies to decide the matter.

"I think the public's completely confused," Dr. Eckel said. "The right studies need to be done where the entire diet is prescribed and the only modification is in cholesterol content."

Cholesterol, "a waxy, fat-like substance that's found in all cells of the body," is needed to make hormones, vitamin D and substances that help digest [food](#). The body makes the amount of cholesterol it needs, the National Institutes of Health states. Cholesterol, found in animal-based foods but not plants, travels in the blood with elevated low-density lipoproteins (LDL) cholesterol levels responsible for the buildup of plaque in arteries, resulting in cardiovascular and heart disease.

Cholesterol in the blood courses back to the liver where it is removed and discarded. But saturated fat in the liver prevent the liver from removing cholesterol, allowing levels to build in the blood, the NIH explains.

Lewis Kuller, professor emeritus at the University of Pittsburgh Graduate School of Public Health, said famous research studies from the 1950s through the 1970s clearly found dietary cholesterol to raise [blood cholesterol](#). But the advisory committee, he said, relies only on research done since 1990. Modern studies survey people about what foods they consumed, as compared to the earlier studies that provided study participants with specific diets to measure the impacts of dietary cholesterol.

For that reason, Dr. Kuller, 81, who's been studying the topic for decades, said the committee's statement "is fallacious."

"The intake of dietary cholesterol has been reduced dramatically (over the decades) primarily by efforts to convince the public to reduce their intake of dietary cholesterol," Dr. Kuller stated in a written response to the committee guidelines. Those population-wide reductions in cholesterol represent "a major public health advance." But that's now at risk if limits on dietary cholesterol are removed. An increase in the nation's average cholesterol rate of a mere 10 milligrams "can be interpreted to result in perhaps a 20 percent increase in the risk of coronary heart disease."

Higher dietary cholesterol intake also has been linked to other health problems, including colon cancer, Dr. Kuller said.

Venkatraman Srinivasan, medical director of the Cardiovascular Institute at West Penn Hospital, said he accepts the committee statement that [dietary cholesterol](#) doesn't affect blood levels.

But he said people should reduce [saturated fat](#) in the diet and follow another guideline recommendation to adopt the Mediterranean diet, with its emphasis on plant-based foods and oils, and meat largely limited to fish.

"The focus should be on a balanced diet, regardless what the guidelines say," he said.

Blood cholesterol levels, he said, no longer represent the sole determinate of whether the cholesterol-lowering statin drugs should be prescribed. Nowadays, risk calculators are used to gauge the need for statin drugs, based on age, gender, blood pressure, diabetes and [cholesterol levels](#).

He said the committee has to be clear about its recommendations.

"To tell someone they can have cholesterol, they think 'steak,'" Dr. Srinivasan said. "When you say cholesterol is not a concern, the mistake is that they think they can eat fat. The guideline must make it clear that eating [cholesterol](#) doesn't give license to eat unlimited amounts of saturated fats."

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