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News from AHA journals:

LOW LEVEL OF 'GOOD' CHOLESTEROL RAISES RISK FOR HEART PATIENTS, STUDY AFFIRMS

DALLAS, Oct. 9 -- It's well-established that heart attack survivors who are unable to get sky-high cholesterol levels down are in danger of having another attack. But what about the sizable minority of coronary heart disease patients and heart attack survivors who already have "desirable" levels of total cholesterol (TC)?

A new report demonstrates for the first time, its authors say, that in patients with desirable TC, low HDL (high-density lipoprotein) cholesterol is "strongly predictive" of future cardiovascular "events" including heart attack and cardiac death.

The report by researchers at Johns Hopkins Medical Institutions in Baltimore appears in the October issue of the American Heart Association's scientific journal Circulation.

Their results lead the scientists to conclude that identifying coronary heart disease patients who have low levels of "good" HDL -- less than 35 milligrams per deciliter (mg/dl) of blood -- should become a high priority. A low level of HDL is "ominous," the scientists say, because participants with low HDL had twice the risk of suffering a new cardiovascular event compared with those with high HDL levels. All of the study participants had desirable TC levels.

The Baltimore team questions whether current guidelines, issued by the National Cholesterol Education Program (NCEP), may need revision "because there are presently no screening recommendations for low HDL when a desirable total cholesterol co-exists." The NCEP is managed by the National Heart, Lung, and Blood Institute on behalf of more than 20 member organizations, including the American Heart Association.

More than seven million people in the U.S. currently suffer from symptoms

of coronary artery disease, which causes narrowing of the coronary arteries so blood flow to the heart muscle is reduced. These people "are at considerable risk for subsequent cardiovascular events," the investigators say in their Circulation report. Approximately 20 percent of people who have suffered a heart attack have levels of total cholesterol deemed desirable -- less than 200 mg/dl, the researchers point out.

"Until this study, there has been little information on what predicts cardiovascular events in heart patients who have desirable levels of total cholesterol," says Michael Miller, M.D., lead author of the study and director of the Preventive Cardiology Center at the University of Maryland Medical Systems, Baltimore.

"Our study suggests a cause-and-effect relationship between low levels of HDL and new events in heart disease patients who don't have high cholesterol," says Miller, who is also an assistant professor of medicine at Johns Hopkins.

High HDL levels are good because it appears that HDL removes cholesterol from the body's cells, including those lining the walls of the coronary arteries, he explains. Average HDL levels are 45-50 for men, 55-60 for women.

Miller and his colleagues defined cardiovascular events as (1) dying from heart and blood vessel disease, (2) suffering a heart attack, or (3) chest pain that led to coronary bypass surgery or angioplasty.

Results of this follow-up study extend previous findings presented by Miller at the AHA's 1988 Scientific Sessions. The earlier report examined 1,000 patients who had undergone coronary angiography (an X-ray view into their coronary arteries) in the 1970s. The researchers found that of individuals with heart disease and a desirable TC, two out of three men and four out of five women also had a low HDL.

Thus the initial study was the first, Miller says, to demonstrate a high prevalence of low HDL in heart disease patients with desirable levels of total cholesterol -- an observation that he notes has been confirmed by at least 10 other medical centers around the world.

The new study focused exclusively on the outcome of the heart disease patients with desirable TC as determined in 1977-78. Subjects from the original study who did not have heart disease or had cholesterol levels greater than 200 mg/dl were excluded from the 13-year follow-up.

The 83 men and 24 women in the follow-up study had an average total

cholesterol level of 175 mg/dl. During the 13 years, 61 percent experienced a cardiovascular event despite their "remarkably favorable" cholesterol levels, notes Frank M. Sacks, M.D., of Harvard Medical School, in an editorial comment on the study.

"In this study, two measurements emerged all-important for predicting future events -- the serum HDL cholesterol concentration and the left ventricular ejection fraction," Sacks writes in Circulation. The left ventricle is the heart's main pumping chamber, and a low "ejection fraction" indicates poor pumping function.

"These findings, although potentially relevant to many patients in a clinical practice, must be considered tentative and in need of confirmation in a larger population," Sacks writes.

In future studies, Miller says, a question that needs to be answered is: "Can raising HDL levels reduce heart disease events in people who have desirable total cholesterol levels?" But first it's necessary to demonstrate that it's possible to raise their HDL levels. Miller says it is possible, using niacin (one form of vitamin B) and another drug called gemfibrozil.

But Miller says he always first recommends an approach that doesn't include drugs. Both exercising regularly, enough to raise your heart rate to two-thirds its maximum for at least 30 minutes three times a week, and quitting smoking may raise HDL levels. And in obese individuals, weight loss can raise HDL levels by five to 10 percent, he says.

Miller says HDL levels can vary, and an individual should have his or her levels measured at least two or three times before worrying too much about a low reading. "One of the reasons the National Cholesterol Education Program has not recommended universal HDL screening is because a lot of laboratories use different ways to measure HDL, and some give falsely high or, occasionally, falsely low levels."

Co-authors of the study were Alexander Seidler, Ph.D.; Peter O. Kwiterovich, M.D.; and Thomas A. Pearson, M.D., Ph.D.

Circulation is one of six journals published by the Dallas-based AHA.

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