



GLADSTONE INSTITUTE OF CARDIOVASCULAR DISEASE NEWS

The J. David Gladstone Institutes
PO Box 419100, San Francisco, CA 94141-9100 415-826-7500
in affiliation with the University of California, San Francisco and San Francisco General Hospital

Alice Trinkl, News Director
Source: Laura Lane (415-695-3833)
E-mail: llane@gladstone.ucsf.edu
Web: <http://gladstone.ucsf.edu>

FOR YOUR INFORMATION
November 2001

RAISING HDL CHOLESTEROL LEVELS AN IMPORTANT COMPONENT IN HEART CARE

Herb Silverman thought that exercising five to six times a week was just the thing to keep his heart healthy and body strong. However, a heart attack that struck at the age of 46 during an aerobics class told a different story. But what could it be? His blood cholesterol was only 169 mg/dl, well below the 200 mg/dl doctors considered to be borderline.

That's when Silverman was referred to the Lipid Clinic at the Gladstone Institute of Cardiovascular Disease where cholesterol expert Thomas P. Bersot, MD, PhD, discovered the problem. The "good" HDL cholesterol component of his blood cholesterol count was abnormally low. While a normal reading is at least 40 mg/dl, Silverman's HDL cholesterol was only 22 mg/dl.

Silverman isn't alone. Of all Americans who suffer from a premature heart attack—one that occurs before age 55 in men and age 65 in women—half have low HDL cholesterol levels, Bersot said. Twenty percent of all heart attacks are premature. The majority can blame their genes for their predicament. Silverman's father first showed signs of heart disease at age 49 and died of a heart attack when he was 62.

Bersot is also UCSF clinical professor of medicine and an associate staff member of UCSF's Cardiovascular Research Institute.

The number of Americans with low HDL levels is growing. Obesity, which is on the rise, causes HDL levels to dip. And earlier this year guidelines were redefined so that more people are now considered to have low HDL levels. Instead of an HDL of 35 mg/dl being considered abnormal, now an HDL level of 40 mg/dl is considered low.

HDL stands for high-density lipoprotein. The liver and the intestine make it so that it can collect excess cholesterol in the walls of arteries. Without enough HDL, cholesterol remains in these blood vessels and eventually causes heart disease.

On the reverse side is LDL cholesterol, the "bad" cholesterol component of a total blood cholesterol count. Unlike HDL, LDL, which stands for low-density lipoprotein, delivers cholesterol to arterial walls as it circulates throughout the body. Keeping LDL levels low is important in staving off heart disease.

A good indicator of healthy cholesterol levels is the total cholesterol-to-HDL ratio. (Total cholesterol and HDL are measured in clinical laboratories, and the ratio is computed

(more)

by dividing total cholesterol by HDL.) A ratio above 4.5 is associated with increased heart attack risk. The lower the HDL, the lower the LDL needs to be to maintain a healthy ratio.

Unfortunately, many doctors, nurses, and other health care practitioners often overlook the significance of low HDL levels, Bersot said. In patients with low HDL levels, health care practitioners often need to decrease LDL levels to lower levels than indicated in current treatment guidelines.

“There’s still not much guidance to doctors on how to deal with these patients,” he said, explaining that current treatment guidelines don’t enforce the importance of raising HDL levels, or of driving LDL levels down far enough to compensate for low HDL levels.

Merely lowering LDL levels, however, usually doesn’t bring the ratio down enough. Typical LDL-cholesterol-lowering drugs will bring down LDL levels by as much as 55 percent—a big effect but sometimes not enough. Raising HDL at the same time, usually does the trick. To obtain a healthy ratio, Bersot normally starts out by prescribing niacin, which can cause HDL levels to increase by as much as 40 percent. He may also prescribe a LDL-cholesterol-lowering drug, if appropriate.

While patients can make good headway with medications, Bersot also stresses lifestyle changes that will help patients to lose weight, which causes HDL levels to increase. Exercise, by itself, increases HDL levels. To decrease LDL levels and help with weight loss, Bersot arranges for his patients to consult with the dietitian on staff at Gladstone’s Lipid Clinic.

Patients, like Silverman, learn about how to eat a diet that’s low in saturated fat, the type of fat found mostly in animal products, which can increase LDL levels. The dietitian instructs patients to choose lean cuts of meat and to cook with oils that are monounsaturated, such as canola or olive oil.

Silverman now takes niacin and a LDL cholesterol-lowering drug. Growing up in New York, he had been accustomed to eating a high-fat diet of meats, cheeses, and fried fish. He now shuns those foods and the ice cream and sweets that he used to eat regularly. While he’s been too busy to exercise for the past year, he recognizes the importance of getting back on the treadmill.

Today, Silverman has increased his HDL to 36 mg/dl and decreased his LDL level so that he has a healthy ratio of four. He credits the care he receives at the Lipid Clinic for his progress. Now 57, he’s optimistic that he’s got a long and healthy life ahead of him.

“Lipid” is a technical name for cholesterol. The Lipid Clinic accepts patients only by referral from physicians. These patients mainly come from the Bay Area and some patients travel from other parts of California. Patients receive specialized care in finding the cause of and correcting abnormal cholesterol levels.

The Lipid Clinic also hosts the Lipid Disorders Training Program that attracts physicians and other health care professionals from around the country. Three times a year, the professionals gather for the three-day program to learn about cholesterol and triglyceride disorders and how to treat them.

The Gladstone Institute of Cardiovascular Disease is one of three research institutes that comprise The J. David Gladstone Institutes, a private biomedical research institution

(more)

affiliated with University of California, San Francisco. The institutes are named for a prominent real estate developer who died in 1971. His will created a testamentary trust that reflects his long-standing personal interest in medical education and research.

###

Note to the media: To interview Bersot or Silverman, please contact Laura Lane at (415) 695-3833.