

Average cholesterol counts: Not low enough

For decades, doctors have been hammering home the warning that excess cholesterol raises a person's risk of heart disease. Yet epidemiological studies have shown that two-thirds of the people with heart disease in North America have no more than average amounts of cholesterol in their blood.

These studies suggest that the average cholesterol concentration—210 milligrams per deciliter of blood (mg/dl)—is, in fact, too high.

Now a new study, the Cholesterol and Recurrent Events (CARE) trial, powerfully buttresses this view. The study found that heart attack survivors who reduce the cholesterol in their blood below the norm can lower their risk of a repeat heart attack.

"These results demonstrate that for patients with coronary disease in North America, the average cholesterol level is too high and can contribute to the recurrence of cardiovascular events," assert Frank M. Sacks of Harvard Medical School in Boston and his colleagues in the Oct. 3 *NEW ENGLAND JOURNAL OF MEDICINE*.

The 5-year study followed 4,159 heart attack survivors age 21 to 75 at 80 medical centers in the United States and Canada. All of the participants began the trial with near-average concentrations of total cholesterol and of low-density lipoprotein (LDL). LDL is known as bad cholesterol for its deadly propensity to form artery-clogging plaque.

A total of 2,081 participants took 40 milligrams of the cholesterol-lowering drug pravastatin each day. The remainder took a placebo.

Sacks and his colleagues regularly tested the cholesterol in participants' blood. The researchers relied primarily on measurements of LDL to gauge the effectiveness of pravastatin in lowering cholesterol and to assess relative heart disease risk.

They found that pravastatin lowered mean LDL concentrations by 32 percent—from 139 mg/dl to 98 mg/dl. This effect lasted for the full 5 years of the study, and it held the treatment group's average LDL to a concentration 28 percent below that of the placebo group.

This sharp drop paid off in vital ways for people in the treatment group. Compared with the placebo group, those taking the drug reduced their risk of heart attack by 24 percent, the researchers say.

The rate of fatal heart attacks was 37 percent lower in the treatment group than in the placebo group, the study found. Those who took the drug were also 26 percent less likely to undergo coronary bypass surgery and 23 percent less likely to have artery-clearing balloon angioplasty. Moreover, people taking the

drug had 31 percent fewer strokes, according to the report.

Although the benefits of lowering cholesterol were most pronounced in people who began the study with the highest concentrations of LDL in their blood, the benefits also extended to those who had lower LDL concentrations at the outset.

For instance, participants whose initial LDL measurements placed them in the bottom one-third of the group still cut their heart attack rate by 15 percent after they began taking pravastatin. "I think this study should give physicians a lot of impetus to treat their coronary patients with cholesterol-lowering drugs and in

general to pay more attention to cholesterol," Sacks says.

Basil Rifkind of the National Heart, Lung, and Blood Institute in Bethesda, Md., concurs. "Most people who have had heart disease should be on cholesterol treatment."

The study does not suggest that people who have not had heart attacks should take cholesterol-lowering drugs. "Whether half the population should be taking pravastatin is another question," Sacks says.

Rifkind agrees with that concern about the drug's long-term safety. "This is not a 10-day course of penicillin. When you prescribe these drugs, you're putting patients on them for 10 or 20 years."

—S. Sternberg

Ancient Egyptian outpost found in Israel

An approximately 5,000-year-old settlement discovered in southern Israel was built and ruled by Egyptians during the formative period of Egyptian civilization, a team of archaeologists announced last week.

The new find, which includes the first Egyptian-style tomb known to have existed in Israel at that time, suggests that ancient Egypt exerted more control over neighboring regions than investigators have often assumed, contends project director Thomas E. Levy of the University of California, San Diego.

"This discovery gives us evidence of a full-blown Egyptian colony in Israel right after the crystallization of the first Egyptian state," Levy asserts. "It supports the theory that ancient Egyptians established a colonial system rather than simply a commerce-based trading system."

Excavations at the 32-acre Halif Terrace site, conducted over the past 3 years, have unearthed many artifacts with stylistic links to Egypt between about 3100 B.C. and 3000 B.C. These include seal impressions, glass and alabaster vessels, amulets, pottery vessels, and molds for bread. A pottery fragment found at the Israeli site bears the incised symbol of King Narmer, one of the earliest known Egyptian rulers.

The most surprising evidence of an Egyptian connection, Levy says, is the 50-foot-long stone tomb, which consists of a passageway leading into an entry area and then into a cave that served as a burial chamber. Though several other nearby sites contain evidence of Egyptian occupation, there are no similar burials. Other contemporary tombs in the region display a different structural arrangement, one attributed to the Canaanites.

Atop a stone platform at the back of the Halif Terrace burial chamber rested the skeleton of a woman who was about 25 years old, according to Levy. She lay curled up on her left side, facing east, a position typical of Egyptian burials at



Passageway of Egyptian-style tomb and vessel (inset) found at Halif Terrace site.

that time, he holds. The tomb contained no burial offerings, and it remains unclear whether it had been looted.

Ancient Egyptians believed that a proper burial on Egyptian soil ensured entry to the afterlife, the San Diego researcher adds. This raises the possibility that they considered southern Israel in the vicinity of Halif Terrace to be part of "greater Egypt," he proposes.

Although the Halif Terrace discoveries add to evidence that ancient Egypt influenced surrounding areas, the purpose of the outpost remains unclear, remarks archaeologist James Weinstein of Cornell University.

"The site may have concentrated on the production or trade of olive oil and wine," Weinstein argues. "It's not clear that it was part of a colonial system."

The intriguing new burial may originally have held a high-ranking Egyptian official, he adds, and the female skeleton in the tomb may have been the wife of a powerful official.

—B. Bower