## Science, Technology & Environment

## Low-Fat Fraud?

"The Soft Science of Dietary Fat" by Gary Taubes, in Science (Mar. 30, 2001), American Assn. for the Advancement of Science, 1200 New York Ave., N.W., Washington, D.C. 20005.

Urged on by experts from government and other quarters, healthy Americans for decades have been struggling to rid their diet of fat and thus, they hope, lose weight, ward off heart disease, and live longer. The food industry spends billions of dollars a year pushing the antifat message, and thousands of food products claiming to be low-fat or no-fat now crowd supermarket shelves. The only thing the whole crusade lacks, reports Taubes, a Science contributing correspondent, is the hard scientific evidence to justify it.

"Despite decades of research," he says, "it is still a debatable proposition whether the consumption of saturated fats above recom-

mended levels . . . by anvone who's not already at high risk of heart disease increase the likelihood of untimely death. . . . Nor have hundreds of millions of dollars in trials managed to generate compelling evidence that healthy individuals can extend their lives by more

than a few weeks, if that, by eating less fat."

Weight loss? It seemed reasonable to suppose that trimming fat from the diet would help, since fat has nine calories per gram compared with four calories for carbohydrates and protein, but science now suggests otherwise. Taubes says. "The results of wellcontrolled clinical trials are consistent: People on low-fat diets initially lose a couple of kilograms, as they would on any diet, and then the weight tends to return. After one to two years, little has been achieved."

For individuals at high risk of heart attack, notes Taubes, the evidence has mounted in recent years that cholesterol-lowering drugs can be beneficial, and for those people, a low-fat diet may also be somewhat helpful. But for healthy individuals, he says, the consequences of a low-fat diet are simply unclear.

In 1988, when Dr. C. Everett Koop was U.S. surgeon general, his office issued a landmark report declaring fat the single most unwholesome component of the American diet—and then set out to produce the definitive scientific report on its dangers. Eleven years later, having run through four directors, the project was quietly killed. The subject proved "too complicated," said one specialist involved.

Since the early 1970s, Americans' average fat intake has fallen from more than 40 percent of total calories consumed to 34 percent. Yet, as a 10-year study published in 1998 in the New England Journal of Medicine found, the inci-

> dence of heart disease does not appear to have declined. "Meanwhile," observes Taubes, "[the incidence of obesity in America, which remained constant from the early 1960s through 1980, has surged"from 14 percent of the population to more than 20 percent. This raises the possibility,



however remote, he says, "that low-fat diets might have unintended consequences among them, weight gain."

Diet is a tradeoff, notes Taubes. If people eat less fat, "they will eat more carbohydrates and probably less protein," since most protein comes in foods such as meat that have considerable fat. A low-fat diet, then, is necessarily a high-carbohydrate diet, just as a low-fat cookie and a low-fat yogurt are necessarily high in carbohydrates. When the federal government began urging low-fat diets, Taubes says, the scientists and others involved hoped that Americans would balance their diets with fruits, vegetables, and legumes. But instead of eating broccoli, Americans simply loaded up on foods rich in carbohydrates. That "may even be worse" than a high-fat diet, Taubes reports.