

OVERWEIGHT ?

Losing Excess Weight Is More Important Than Trimming Dietary Fat

Reduce the fat in your diet, particularly saturated fat. That's the standard prescription for lowering blood cholesterol. But it doesn't work as well for everyone. For example, people who are obese—20 percent over their ideal weight—need to trim extra pounds in order to get the full benefit from trimming dietary fat.

What about people who are overweight but not obese? Would they be better advised to focus on dropping extra pounds—or dropping some dietary fat?

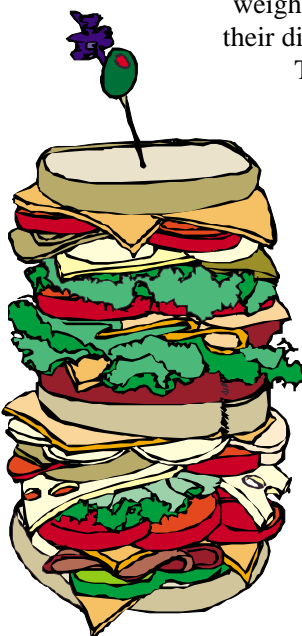
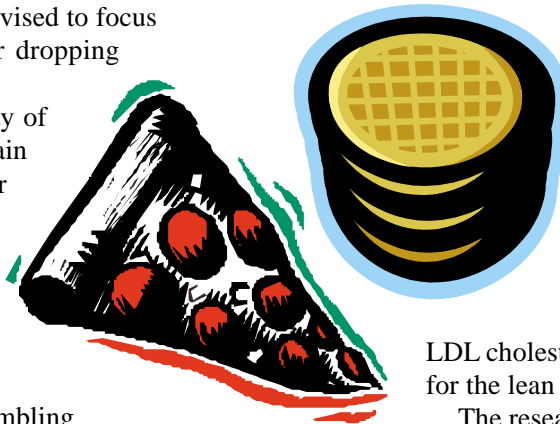
Researchers at the University of Cordoba Medical School in Spain enlisted 41 young men to answer the question, with help from their U.S. colleague, Jose M. Ordovas. He's at USDA's Human Nutrition Research Center on Aging at Tufts University in Boston.

Ordovas is a pioneer in assembling a profile of genes involved in heart disease risk. (See "Attacking Heart Disease at Its Genetic Base," *Agricultural Research*, July 1999, pp. 20-21.) "We're trying to customize the prescription for reducing risk," he says. "It's now a matter of trial and error."

He says genes involved in bodyweight appear to hold sway over genes that control how blood lipids respond to dietary changes. Losing weight switches off some weight genes, canceling their effect on the genes that affect blood lipid levels. In fact, some of the genes involved in this interaction may be the same.

The researchers tested three diets on the men. Half were overweight, with a body mass index (BMI) between 25 and 30 kilograms per meter squared (kg/m^2). That's equivalent to a 6-foot man weighing 185-215 pounds, or a 5-foot, 8-inch man weighing 165-195 lbs.

For 4 weeks, the men ate a high-fat diet: 38 percent fat, 20 percent of which was saturated



fat. Then they switched to the low-fat diet recommended by the National Cholesterol Education Program (NCEP)—28 percent fat, 10 percent saturated fat. Lastly, they ate another high-fat (38-percent) diet. But instead of being heavy in saturated fat, it was high in monounsaturated fats (22 percent)—the predominant fats in olive and canola oils. These fats are proving beneficial for the cardiovascular system.

The overweight men began with higher total cholesterol and triglycerides than the slim group and less "good" HDL cholesterol. Ordovas says blood lipids are correlated with body weight and BMI.

Both heart-healthy diets were less effective at improving the cholesterol profile in the overweight men. On the NCEP diet, their total cholesterol drop was less than half that of the lean men—7 percent versus 16 percent. Likewise, their artery-damaging

LDL cholesterol dropped 9 percent, compared to 21 percent for the lean group.

The researchers concluded it's more important for overweight men to lose weight than to change the fat content of their diets.

The overweight men did have a bigger drop in triglycerides when eating the diet high in monounsaturated fats. This suggests that portly people should substitute olive or canola oil for saturated fat.

"High triglycerides are associated with reduced glucose tolerance"—the earliest stage of diabetes, says Ordovas. "And evidence is mounting that they are an independent risk factor for heart disease."—**By Judy McBride, ARS.**

This research is part of Human Nutrition, an ARS National Program (#107) described on the World Wide Web at <http://www.nps.ars.usda.gov/programs/appvs.htm>.

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