

UT News

Office of Medical Information
The University of Texas Health Science Center at Dallas
5323 Harry Hines Boulevard Dallas, Texas 75235
214/688-3404

March 27, 1986

CONTACT: Tommy Joy Bosler
Office: 214/688-3404
Home: 214/327-1773

****Monounsaturated fats lower cholesterol
as well as low-fat diet, study proves

DALLAS--Watching your cholesterol? If so, a plate of spaghetti with olive oil and clam sauce may sound as forbidden as an eight-ounce rib-eye steak. Not so, according to recent research at The University of Texas Health Science Center at Dallas.

Substituting a monounsaturated fat, like olive oil, for the saturated fats you'd get in meat and dairy products lowers cholesterol just as effectively as the kind of low-fat diet usually recommended to reduce serum cholesterol.

Dr. Scott M. Grundy, director of the Center for Human Nutrition at UTHSCD, tested three different diets on eleven patients at the Veterans Administration Hospital in Dallas and compared their effects on blood lipid levels. The patients began the study with moderately high blood cholesterol levels, averaging 250 milligrams per deciliter.

The liquid diets used for the study were carefully formulated to maintain the patients at an even weight and to maintain a specific balance between protein, carbohydrate and fat. But they were designed to compare the effects of eating styles that might be tagged Typical American, Mediterranean and Oriental. According to the World Health Organization, the death rate per thousand from heart disease and stroke for men aged 40 to 69 years in 1975 was 37.02 in Japan, 37.3 in Italy and 49.6 in the United States.

The Typical American diet is high in saturated fats. It has about 40 percent of its total calories supplied by fat, 43 percent by carbohydrates and 17 percent by protein. In Grundy's study, the liquid diet supplied 28 percent of these calories in saturated fats, with 8 percent in monounsaturated fat and 7 percent in polyunsaturates. Polyunsaturated fats are commonly found in vegetable oils like corn and safflower oil.

As expected, the four weeks spent on the diet high in saturated fat resulted in higher-than-normal blood lipid levels. Measurements were taken of total cholesterol, total triglycerides and two cholesterol subtypes: low-density lipoproteins (LDL), which contribute to atherosclerosis, and high-density lipoproteins (HDL), which show cholesterol is being cleared from the blood. These four measurements were used as the baseline for comparing the effects of the other two diets.

An Oriental diet is usually considerably lower in fat and higher in carbohydrates than the Typical American diet. Because death rate from coronary heart disease in Japan is much lower than in the United States, modeling low-fat diets after their style of eating could be healthier. For example, steamed vegetables with rice and meat would fill the order for a low-fat diet.

Grundy's equivalent used 63 percent carbohydrate, 17 percent protein and only 20 percent fat (divided equally between the three types.) The proportion of protein stayed the same, but carbohydrates made up for the calories lost by reducing fats.

The low-fat diet dropped total cholesterol an average of 8 percent below the high saturated fat diet. It dropped LDL cholesterol 15 percent. Those results were desirable. However, the low-fat diet caused the "good" cholesterol, HDL, to fall and triglycerides to rise significantly. Those results were not desirable.

The diet high in monounsaturated fat that Grundy used was formulated to represent the kind of diet eaten in the countries around the Mediterranean. Italian, Greek and Spanish cuisine lean heavily on olive oil, pasta, and chicken or fish. Its comparatively high fat content makes it palatable to Americans, yet statistics show that heart attack rates in this region are much lower than in America.

(More)

The results showed a drop in total cholesterol of 13 percent from the high-saturated fat baseline, with a 21 percent drop in LDL. There was no change in HDL or triglycerides. Unlike the low-fat diet, all results were desirable.

The high monounsaturated test diet had 40 percent of calories in fat, 43 percent in carbohydrate and 17 percent in protein, the same percentages as the high-saturated fat diet and double the fat content of the low-fat diet. The big difference was the emphasis on monounsaturated fat--28 percent--along with 8 percent polyunsaturated and 4 percent saturated.

The results of the study by Grundy, professor of internal medicine and biochemistry at The University of Texas Health Science Center at Dallas, were published in the March 20, 1986, issue of *The New England Journal of Medicine*.

"The good news coming out of this study," say Grundy "is that Americans concerned about their cholesterol can enjoy an occasional alternative to a low-fat regimen. It should be a welcome change."

Although two of the diets in the study allotted 40 percent of their calories to fat, both the Center for Human Nutrition and the American Heart Association suggest that a prudent diet contain no more than 30 percent of its calories in fat.

Because each gram of fat contains twice as many calories as a gram of carbohydrate or protein, a lower-fat diet makes it easier to control calories.

"A Mediterranean diet has now been proven to be just effective as an Oriental diet at lowering cholesterol, but it could easily be more fattening if you were weighing food instead of counting total calories," concludes Grundy.

###

Distribution: AA,AB,AC,AF,AG,AH,AI,AK,AM,SC,SL.

EDITORS NOTE: If you use this information for an article, we would like to receive a copy.