## Weighing In on Fats

he 2005 Dietary Guidelines for Americans included—for the first time—recommendations that folks in the United States limit their intake of fats and oils that are high in trans fatty acids. Landmark research conducted earlier by scientists at the Beltsville [Maryland] Human Nutrition Research Center (BHNRC) contributed to that conclusion.

One of those early studies was authored by BHNRC's Joseph Judd, now retired, and nutritionist Beverly A. Clevidence, with colleagues. They fed 58 male and female volunteers, aged 26 to 64, four controlled diets, characterized as moderately high trans fat, high trans fat, high saturated fat, and high "heart healthy" oleic acid. LDL cholesterol levels were measured each time the volunteers completed one of the diets for a 6-week period. The study showed that after they consumed any of the trans-fat or saturated-fat diets—as opposed to the oleic-acid diet—their LDL cholesterol levels were significantly increased.

Trans fats cause metabolic changes that increase the amount of circulating LDL cholesterol, which in turn can get deposited in blood vessel walls.

The scientists also reported that it's important not to replace dietary trans fats with saturated fats. In fact, the 2005 *Dietary Guidelines* recommend consuming less than 10 percent of daily calories from saturated fatty acids. That's 22 grams or less for a 2,000-calorie diet.

Saturated fat and trans fat tend to be solid at room temperature. The thick, yellow grease that forms in a cool pan after cooking meat is saturated fat. Both types of fats can collect in the body and clog arteries, leading to heart disease.

A 2007 ARS data analysis shows that U.S. consumers aren't winning the battle on staving off fats. The researchers studied the levels and sources of saturated and unsaturated fats in the American diet. The analysis—which was based on nationally representative dietary-intake survey data from *What We Eat in America/NHANES* 2003-2004—was led by nutritionist Alanna J. Moshfegh. She heads the Food Surveys Research Group at BHNRC. The researchers found that about 64 percent of adults in the United States exceed the dietary recommendation for consuming saturated fat.

People can keep an eye on their fat intake by reading food labels. New labeling laws require foods to be labeled for their trans fat as well as their saturated fat content.

For example, a croissant has about the same number of calories as a bagel. But a croissant, which is a buttery puff pastry, has 32 times as much saturated fat (6.6 grams compared to an oat-bran bagel's 0.2 grams). This information and more can be found in two key tables on saturated fats and trans fats in chapter 6 of the 2005 *Dietary Guidelines for Americans*. The source of the tables on fat content is the ARS Nutrient Database for Standard Reference, Release 17. Release 20, the current



## Food Choices Have a Big Effect on Saturated-Fat Consumption

Food	Portion	Saturated fat (in grams)
Cheese		
Regular cheddar chee	ese 1 oz.	6.0
Low-fat cheddar chee	ese 1 oz.	1.2
Chicken		
Fried (leg with skin)	3 oz. (d	cooked) 3.3
Roasted (breast, no s	kin) 3 oz. (d	cooked) 0.9
<b>Ground beef</b>		
Regular (25% fat)	3 oz. (d	cooked) 6.1
Extra-lean (5% fat)	3 oz. (d	cooked) 2.5
Milk		
Whole (3.25% fat)	1 cup	4.6
Low-fat (1%)	1 cup	1.5
Fish		
Fried	3 oz.	2.8
Baked	3 oz.	1.5

Source: ARS National Nutrient Database for Standard Reference, Release 20.

version of this data, is available at www.ars.usda.gov/Services/docs.htm?docid=8964 as the newest resource for checking the nutrient and fat content of foods.

To access the *Dietary Guidelines* online, go to www. mypyramid.gov/guidelines/index.html.—By **Rosalie Marion Bliss**, ARS.

This research is part of Human Nutrition, an ARS national program (#107) described on the World Wide Web at www.nps. ars.usda.gov.

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