

Robert M. Kerr Food & Agricultural Products Center



FOOD TECHNOLOGY FACT SHEET

Adding Value to OKLAHOMA

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Trans Fats, Health and Nutritional Labeling of Foods

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The Food and Drug Administration (FDA) requires that total, saturated and *trans* fat (TF) and cholesterol contents of the products are listed on Nutrition Facts and Supplement Facts panels. The labeling requirements are based on scientific evidence that consumption of saturated fats and TF may raise low-density lipoprotein (LDL) levels and increases the risk of coronary heart disease. LDL is commonly known as “bad cholesterol”.

A small amount of TF is found naturally in vegetable oils and some animal derived foods. The majority of the TF in our food comes from the addition of hydrogen to vegetable oils, a process called hydrogenation, which is used to convert liquid oils into solid fats such as shortening and margarine. Hydrogenation increases the shelf life and flavor stability of foods containing these fats. TF can often be found in foods made with partially hydrogenated vegetable oils such as vegetable shortenings, some margarines (especially hard margarines), crackers, candies, cookies, snack foods, fried foods and baked goods. Fully hydrogenated oils do not contain TF.

Since 2006, food manufacturers have been required to include *trans* fat content information on the Nutrition Facts label on the packages. Currently, food manufacturers are allowed to make “*trans* free” or “no *trans*” claims if the amount of *trans* fat in the product is less than 0.5 g *trans* fat per serving. One serving is defined as one tablespoon or about 12 g of *trans* fat. Hence, *trans* free or no *trans* claims on the product packages do not necessarily mean that the product does not contain any *trans* fat. Check the ingredient list on the package to see if any hydrogenated oil is listed.

Although *trans* fat consumption decreased about 78 percent between 2003 and 2012, the current TF intake remains a public health concern. In June 2015, the U.S. Food and Drug Administration finalized its determination that foods made

with partially hydrogenated oils (PHOs), the primary dietary source of artificial *trans* fat in processed foods, are not “generally recognized as safe” or GRAS for use in human food. Food manufacturers will have three years (until June 2018) to remove PHOs from products. This will allow companies to either reformulate products without PHOs and/or petition the FDA to permit specific uses of PHOs. Following the compliance period, no PHOs can be added to human food unless they are otherwise approved by the FDA.

Consumers can reduce the amount of TF in their diet by limiting foods made with partially hydrogenated oils. Healthy alternatives to these fats include monounsaturated oils (i.e. olive and canola) and polyunsaturated fats (i.e. soybean, corn, sunflower oils, and foods like fish and nuts).

While milk and dairy foods contain small amounts of naturally occurring TF, in most cases the amount per serving is less than the FDA’s labeling threshold of 0.5g per serving. Scientific research shows some naturally occurring TA may have health benefits. For example, there is a *trans* fatty acid found in dairy foods known as conjugated linoleic acid (CLA) that has been shown to have potential cancer-inhibiting properties. The FDA regulation does not require CLA to be included in the labeling of TF.

TF content of foods can be found on a separate line immediately beneath the saturated fat on the nutrition label (Figure 1). Currently there is no defined % Daily Value (DV) for TF. Dietary supplement manufacturers must also list TF on the Supplement Facts panel if they contain more than 0.5 g or more TF per serving. The examples of dietary supplements with TF would be energy and nutrition bars. More information on TF regulation can be found on the FDA web page: www.fda.gov/Food/GuidanceRegulation/GuidanceDocuments-RegulatoryInformation/LabelingNutrition/ucm2006828.htm

Sample Label for Macaroni and Cheese

Start Here

**Limit these
Nutrients**

**Get Enough
of these
Nutrients**

Footnote

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 1.5g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

**Quick Guide
to % DV**

**5% or less
is low
20% or more
is high**

Fat is an important component in most foods. Selection of a suitable type of fat for formulation of baked goods is particularly important because fat adds moisture, flavor and retards the staling process. Spreadability or plasticity is very important for formulating a non-hydrogenated fat or margarine to be used in baking applications. No *trans* fat replacers are usually a blend of vegetable oils, emulsifiers, hydrocolloids and gums. Some manufacturers pursue palm oil blends to replace partially hydrogenated fats because palm oil contains more saturated and solid fat at room temperature than most other oils. Although the debate about the role of saturated fats in maintenance of health is not over, there is significant amount of scientific data indicating that both types of fats, TF and saturated fat, increase LDLs, which contribute to atherosclerosis and high cholesterol. When formulating a healthier product, lowering both the saturated fat and TF, not just one, should be the goal.

Figure 1. An example of revised nutrition facts panel listing *trans* fat.

The Oklahoma Cooperative Extension Service Bringing the University to You!

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; home economics; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of Cooperative Extension are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and based on factual information.

- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.