

Nutrition News

Department of Human Nutrition



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More Bad News about Trans Fats

Several decades ago scientists discovered *saturated* fats in our diets, including butter and lard, tend to increase the risk of heart disease by increasing the amount of LDL cholesterol (the bad cholesterol) in our blood. As a result, food chemists went to work to develop a fat that would have some of the same desirable properties as saturated fats, but not be saturated. They turned their attention to *unsaturated fats* which generally decrease LDL cholesterol. The scientists altered the molecular make up of these fats through a process called partial hydrogenation, resulting in the creation of *trans* fats. So satisfactory were these fat and oil substitutes that they were readily accepted as ingredients in many of our favorite foods such as bakery products, margarine and dressings—providing many benefits such as extended shelf life and desirable texture.

Problem solved?
Unfortunately, several years later studies began finding that trans fats were not decreasing our risk of heart disease, but rather increasing it even *more* than saturated fat did! What happened? It turned out that trans fats were not only increasing LDL cholesterol, but also decreasing HDL cholesterol (the good cholesterol). Trans fats were also found to cause inflammation of blood vessels, increasing the risk of clot formation which can trigger a cardiovascular event such as heart attack or stroke.

If that isn't bad enough, recent studies have shown an association between trans fats and increased risk of invasive breast cancer. A seven-year study conducted by the French component of the *European Prospective Investigation into Cancer and Nutrition* followed almost 20,000 women who completed diet histories and provided blood samples. In analyzing the results, scientists calculated that

trans fats were associated with a 75% increase in invasive breast cancer risk.

In another study, Harvard researchers followed 15,000 men over 13 years. Findings suggested that an increased intake of trans fats may raise the risk of *non-aggressive* prostate tumors by nearly 100%. However, trans fats do not appear to be linked to risk of aggressive prostate tumor development.

Although it has not been proven in human infants, a Brazilian study found that rats fed diets which included partially hydrogenated oil (trans fats) had insulin insensitivity when they matured. This suggests that exposure to trans fats causes blood glucose to remain at a higher level than normal as rats mature, and thereby heightens the risk of type 2 diabetes. These preliminary findings suggest further examination of the impact on trans fats in humans is in order.

What can we do now to protect ourselves? The FDA has mandated that trans fats be listed on all nutrition fact labels. That's good, but it is not a panacea. If trans fats are in a product at less than .5g/ serving, identification is not required. An individual who consumes several servings of processed foods could easily be ingesting much more than the American Heart Association's recommendation of no more than 1% of calories/day from trans fats (approximately 2g/day in a 2000 calorie diet).

The bad press on trans fats has not been lost on the food industry. It has redoubled its efforts to eliminate trans fats in our processed foods through chemical manipulation (esterification) of a variety of oils. In the meantime, we can be empowered consumers by carefully scrutinizing the nutrition facts label and the list of ingredients on a food product, looking for words like "trans" and "partially hydrogenated." We can ask restaurants we frequent if they use partially hydrogenated oils, we can

select "trans fat free" liquid or soft margarine, and we can modify our recipes to use a variety of natural, unhydrogenated oils such as olive and canola.

Sources:

American Journal of Epidemiology. *Association between serum trans-monounsaturated fatty acids and breast cancer risk in the E3N-DPIC Study*. June 2008.

Cancer Epidemiology Biomarkers & Prevention (Vol. 17). *A prospective study of trans-fatty acid levels in blood and risk of prostate cancer*. Jan. 2008.

Nutrition. *Trans fatty acids in maternal milk lead to cardiac insulin resistance in adult offspring*. July-August 2008.

For more information about healthy eating, contact your local extension office.

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To find out more, call toll-free 1-888-369-4777.

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