About Trans Fat

There are four kinds of fats: monounsaturated fat, polyunsaturated fat, saturated fat, and trans fat. Monounsaturated fat and polyunsaturated fat are the "good" fats. It is generally accepted that consumption of saturated fat should be kept low, especially for adults. **Trans fat (which means trans fatty acids) is the worst kind of fat, far worse than saturated fat.**

Partial hydrogenation is an industrial process used to make a perfectly good oil, such as soybean oil, into a perfectly bad oil. The process is used to make an oil more solid; provide longer shelf-life in baked products; provide longer fry-life for cooking oils, and provide a certain kind of texture or "mouthfeel." The big problem is that partially hydrogenated oil is laden with lethal trans fat.

It is only the trans fat created by the partial hydrogenation of vegetable oils that we are concerned about and that should be eliminated completely from your diet. We at BanTransFats.com are not concerned with the kind of naturally occurring trans fat found in small amounts in pomegranets, cabbage, peas, or the type found in the meat and milk of cows, sheep and goats.

Partially hydrogenated oils are commonly found in processed foods like commercial baked products such as cookies, cakes and crackers, and even in bread. They are also used as cooking oils (called "liquid shortening") for frying in restaurants.

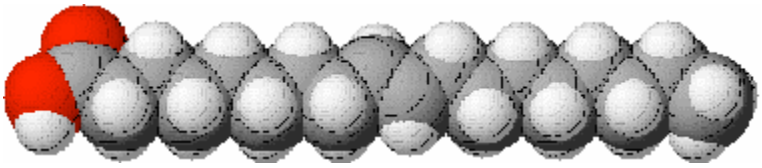
Top nutritionists at Harvard have stated as follows:

"By our most conservative estimate, replacement of partially hydrogenated fat in the U.S. diet with natural unhydrogenated vegetable oils would prevent approximately 30,000 premature coronary deaths per year, and epidemiologic evidence suggests this number is closer to 100,000 premature deaths annually."

30,000 to 100,000 premature deaths each year means between 82 and 274 each day!

The trans fatty acid molecule

If you are not interested in the science, you can skip to the next section below entitled "Health effects." If you are interested in the science, here is a brief explanation.



In the illustration above, the light grey rounded areas are hydrogen atoms and the dark grey areas are carbon atoms. Note the different positioning of the hydrogen atoms in the middle which is caused by partial hydrogenation. The hydrogen atoms in the middle are in a "trans" position which makes this a "trans" fatty acid. The effect is to straighten out the molecules so they can pack together more closely and make the oil less liquid and more solid.

Health effects

One of the reasons that partially hydrogenated oils are used is to increase the product's shelf life, but they decrease your shelf life.

Trans fats cause significant and serious lowering of HDL (good) cholesterol and a significant and serious increase in LDL (bad) cholesterol; make the arteries more rigid; cause major clogging of arteries; cause insulin resistance; cause or contribute to type 2 diabetes; and cause or contribute to other serious health problems.

Explanation of terms

LDL (bad) cholesterol: The main source of cholesterol buildup and blockage in the arteries.

HDL (good) cholesterol: Carries cholesterol from the blood back to the liver, which processes the cholesterol for elimination from the body. HDL makes it less likely that excess cholesterol in the blood will be deposited in the coronary arteries. (HDL levels, to be considered "normal," should be at least 35 - 40 mg/DL.)

Blood vessels: There are three types of blood vessels: arteries, veins, and capillaries. The **arteries** carry blood away from the heart. The **capillaries** connect the arteries to veins. Finally, the **veins** carry the blood back to the heart.

"There is considerable evidence linking an increased risk of heart disease and stroke more strongly to low HDL levels than to high LDL levels. For every one-milligram rise in "good cholesterol," the risk for developing cardiovascular disease falls by 2 percent to 3 percent. A level of 60 milligrams or higher helps to protect against this major killer.

In addition to enabling the body to get rid of unwanted cholesterol, HDL also acts in several other protective ways: as an antioxidant deterring the harmful oxidation of LDL, and as an anti-inflammatory agent, helping to repair what is now considered a major player in blood vessel disease. And it has anti-clotting properties, which can help keep blood clots from blocking arteries."

Studies

On a per-calorie basis, trans fats appear to increase the risk of coronary heart disease more than any other macronutrient, conferring a substantially increased risk at low levels of consumption (1 to 3 percent of total energy intake). In a meta-analysis of four prospective cohort studies involving nearly 140,000 subjects, including updated analyses from the two largest studies, **a 2 percent increase in energy intake from trans fatty acids was associated with a 23 percent increase in the incidence of coronary heart disease**....

The U.S. Government position

On January 12, 2005, the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) issued the *Dietary Guidelines for Americans 2005*. The *Guidelines* include the following recommendation:

Consume 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep trans fatty acid consumption as low as possible.

The *Guidelines* also contain the following strong message to the food industry:

Because trans fatty acids produced in the partial hydrogenation of vegetable oils account for more than 80 percent of total intake, the food industry has an important role in decreasing trans fatty acid content of the food supply.

Tommy Thompson, the Secretary of HHS, said at a news conference on the *Guidelines* on January 12, 2005 that the **FDA may recommend that daily intake of trans fat be less than 2 grams, perhaps less than 1 gram**. In effect, that would mean totally avoiding any food containing partially hydrogenated oils.

In March 2003, Denmark issued new regulations limiting the amount of trans fat in processed foods. Denmark's food minister said: "We put the public health above the industry's interests." Why can't the United States do the same?

The American Heart Association position

In June 2006, the American Heart Association (AHA) issued its "2006 Diet and Lifestyle Recommendations." The recommendations contain a balanced approach to maintaining a healthy diet. **The full recommendations are well worth reading as they represent the "state of the art" on nutrition.**

On the subject of trans fat, the AHA recommends that your daily intake of trans fats be limited to 1 percent of total calories, which is equivalent to roughly 2 to 2.5 grams of trans fat per day. (The AHA also recommends that you limit saturated fat to about 15 to 19 grams per day.)

The AHA makes a "high-priority recommendation" that food manufacturers and restaurants replace partially hydrogenated oils with low saturated fat alternatives." We wholeheartedly agree.

How much trans fat is in the products that we eat?

How much trans fat do we consume in a day? Some of us are consuming virtually none, because we are being extremely selective about what we eat. Some of us are consuming in excess of 15 grams of trans fat per day. If that sounds unbelievable, look at the following figures:

- One McDonald's large fries contains 8 grams of trans fat.
- A McDonald's apple pie contains 4.5 grams of trans fat.
- Four Girl Scout shortbread cookies contain 1.5 grams of trans fat.
- A large order of KFC Popcorn Chicken contains 7 grams of trans fat.
- KFC's Chicken Pot Pie contains 14 grams of trans fat.
- A typical 3-piece KFC Extra Crispy combo meal, with a drumstick, two thighs, potato wedges, and a biscuit contains 15 grams of trans fat.

Incidentally, don't think that the problem is only at McDonald's or other fast-food chains. Nothing could be further from the truth. **Many other restaurants, including "quality" restaurants, fry their food in partially hydrogenated oil and served baked goods containing partially hydrogenated fat. Many of them serve larger portions with more trans fat than McDonald's.**

How much are you consuming?

What not to eat

Here are six rules to help you avoid consuming partially hydrogenated oils. Don't think for one minute that this is all you need to do for your heart and your health. Eliminating partially hydrogenated oils from your diet is just one piece of the puzzle

1. Don't eat any product which has the words "partially hydrogenated" or "shortening" in the ingredients list.

The U.S. Food and Drug Administration advises:

Consumers can know if a food contains trans fat by looking at the ingredient list on the food label. If the ingredient list includes the words “shortening,” “partially hydrogenated vegetable oil” or “hydrogenated vegetable oil,” the food contains trans fat. Because ingredients are listed in descending order of predominance, smaller amounts are present when the ingredient is close to the end of the list.

Note: Fully hydrogenated oils do not contain trans fat. However, if the word "hydrogenated" is used without the word "partially," that product may contain partially hydrogenated oil. Not all labeling is accurate and the word "partially" may have been wrongfully omitted on some products.

2. If the label says zero trans fats, don't believe it. If the words "partially hydrogenated" or "shortening" are in the ingredients list, it DOES contain trans fat.

Under FDA regulations in effect in the United States, "if the serving contains less than 0.5 gram [of trans fat], the content, when declared, shall be expressed as zero." Suppose a product contains 0.4 grams per serving and you eat four servings (which is not uncommon). You have just consumed 1.6 grams of trans fat, despite the fact that the package claims that the product contains zero grams of trans fat per serving. Changing this rule is a high priority for BanTransFats.com. We are working on it.

3. Be careful when consuming products with labels from outside the United States. Sometimes they contain partially hydrogenated oil but it's not on the label.

4. In restaurants, bakeries, and other eateries, ask whether they use partially hydrogenated oil for frying or baking or in salad dressings. If they say they use vegetable oil, ask whether it is partially hydrogenated. Don't be shy about asking. Assume that all unlabeled baked and fried goods contain partially hydrogenated oil, unless you know otherwise.

Ask about that fried food. Ask about the oil in the salad dressing. Ask about that donut. Ask about that pie crust. Ask about that bread. When you ask, you are sending a message to the seller of the food that you don't want trans fats.

5. Keep saturated fat intake low too. This is very important.

6. Remember that polyunsaturated fat and monounsaturated fats are good fats.

One more thing. Cholesterol that affects our arteries comes from two sources: (i) animal products and (ii) bad fats. If a product is "cholesterol fee," that doesn't mean that it won't raise your bad cholesterol. If the product itself contains no cholesterol but it does contain trans fat or saturated fat, it will raise your bad cholesterol.