



SUNSHINE CHIROPRACTIC

Trans Fats (Partially Hydrogenated Fat)

Hydrogenation of vegetable oils was patented in 1902. Procter & Gamble bought the patent and started producing Crisco from mainly cotton seed oil in 1911 in the US. This is the cover of the 1912 Crisco cookbook.

Hydrogenated and partially hydrogenated fats have been with us for a long time. This does not mean they are good for us. As a matter of fact, they are not! So **what is hydrogenation?** Hydrogenation is the addition of hydrogen to a chemical and, in this case, a vegetable oil. The process requires high heat and pressure which changes the structure of the fats. Normally, unsaturated fats are liquid at room temperature, but when hydrogen is added, it makes them more saturated (with hydrogen) thus making them more solid at room temperature. Saturated fats, such as animal fat are solid at room temperature. During this process, not only is hydrogen added, but the structural shape of the fat is changed from a “cis” to a “trans” configuration (shape). Hence the name “**trans fat.**”

Why was there a change to hydrogenated fats? One reason is the **shelf life** of the fat. These fats do not need as much refrigeration as do lard and butter which were used before these fats were produced. Second, they are **cheaper** to make and with their semi-solid consistency at room temperature, they are ideal for suspending solids in the baking process. Third, they are used in deep-frying in restaurants, because they have a high smoke point temperature and last longer before becoming rancid.



What are the dangers of Trans Fats?

- Consuming them **increases the risk of coronary heart disease (CHD)** significantly more than eating saturated fats (primarily animal fats) and increases it much more than eating non-trans polyunsaturated fats. There is double the risk of CHD for every 2% increase in trans fat calories in your diet as compared to 15% increase in saturated fat calories needed to double your risk
- They **increase LDL (bad cholesterol) and decrease HDL (good cholesterol)**, which are risk factors for CHD. Saturated fats only increase LDL without lowering HDL.
- They **increase C-reactive protein (CRP)** which is a measure of inflammation in the body. Inflammation is associated with arterial damage as well as many other chronic diseases.
- Other diseases and conditions with an association with trans fats: Alzheimer's disease, diabetes, obesity, infertility, liver dysfunction and cancer
- Trans fats are artificial fats which the body has a difficulty getting rid of and they stay in the blood stream longer and get deposited in the arterial wall plaques (hardening of the arteries)

What are the sources of trans fats in our diet?

- **They are everywhere! Read the labels on the foods you are buying. If it says, "Partially Hydrogenated Oil," it is a trans fat!** On Jan 1, 2008, the FDA ruling allows up to .5 gms per serving of partially hydrogenated oils to be listed as having 0 trans fats! This is terrible since the National Academy of Science (NAS) concluded there is no safe level of trans fats in our diet.
- Most common sources are:
 - margarine and spreads
 - packaged foods like cake mixes and Bisquick
 - soups
 - fast foods: deep frying (french fries 40% trans fats, chicken, fish, etc.)
 - frozen foods: pies, pizza, pot pies, waffles and even fish sticks
 - baked goods: donuts (35-40% trans fats), cakes, etc.
 - chips, cookies (30-50% trans fats) and crackers
 - breakfast foods like cereal and energy bars
 - dips and toppings such as nondairy creamers, flavored coffees, whipped toppings and bean dips
 - salad dressings
 - microwave popcorn

You can not eliminate trans fats entirely, but the more you decrease them, the healthier you will be. Read the labels!