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Do you know what is Trans Fats?

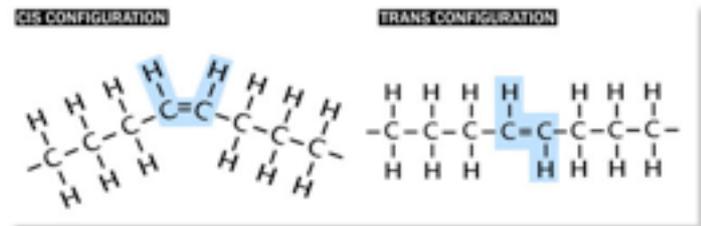
Recently the U.S. Food and Drug Administration (FDA) made an announcement to give the food manufacturers three years to remove the partially hydrogenated oils (PHO) from their products. This is a big step forward to our health and medical field because Tran Fats are a concern to increase the risk of coronary heart diseases. In Hong Kong, we tend to get a lot of imported foods from the western countries and we need to be extra careful when it comes to Tran Fats.

What are Tran Fats?

Tran Fats, is the short form for Tran Fatty Acid (TFA). Artificial trans fats can be formed when oil goes through a process called hydrogenation, which makes the oil more solid. This type of fat, known as hydrogenated fat, is found in wide range of food. It can be used for frying or as an ingredient in processed foods. Trans fats can also be found naturally in some foods at low levels, such as those from animals, including meat and dairy products.

Artificial trans fats can be found in:

- **Baked goods:** Most cakes, cookies, pie crusts and crackers contain shortening, which is usually made from partially hydrogenated vegetable oil. Ready-made frosting is another source of trans fat.
- **Snacks:** Potato, corn and tortilla chips often contain trans fat. And while popcorn can be a healthy snack, many types of packaged or microwave popcorn use trans fat to help cook or flavor the popcorn.
- **Fried food:** Foods that require deep frying — french fries, doughnuts and fried chicken — can contain trans fat from the oil used in the cooking process.
- **Refrigerator dough:** Products such as canned biscuits and cinnamon rolls often contain trans fat, as do frozen pizza crusts.
- **Creamer and margarine:** Nondairy coffee creamer and stick margarines also may contain partially hydrogenated vegetable oils.
- **Salad dressing:** particular the one with mayonnaise



Arrangement of atoms

The chains of carbon atoms are on the same side of the double bond, resulting in a kink.

Hydrogen atoms are on the opposite side of the double bonds of the carbon chain, making the fat molecule straight.

Melting Point

Usually low. Some cis fats are liquid at room temperature.

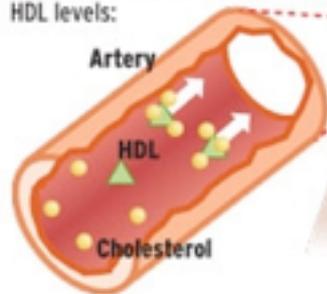
Usually high. Trans fats, like saturated fat, are solid at room temperature.

Trans fats and the body

Trans fats (also known as partially hydrogenated oils) are created by adding hydrogen to liquid vegetable oil. This process makes the fat more solid, lengthens its shelf life and makes it more suitable for frying and other uses. However, trans fats are also more unhealthy than regular, unsaturated fats. Here's why:

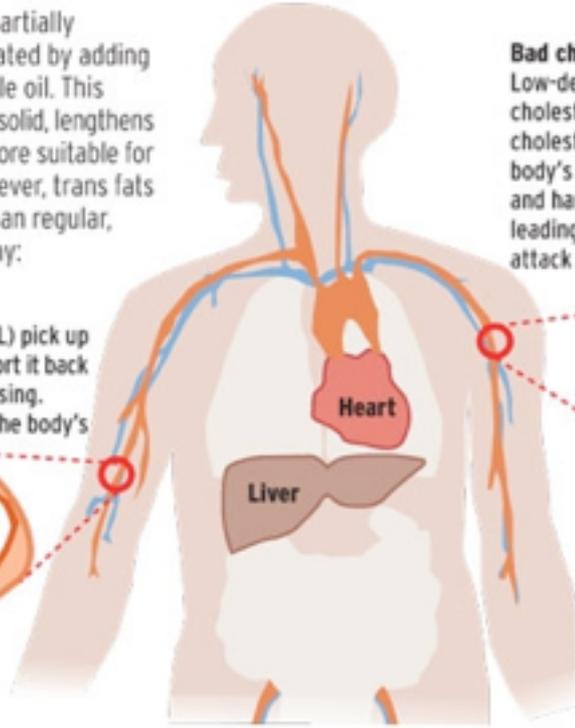
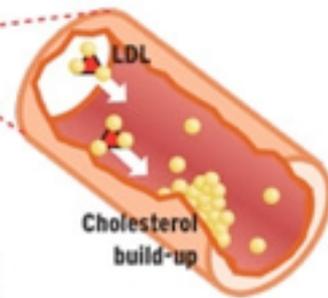
Good cholesterol

High-density lipoproteins (HDL) pick up excess cholesterol and transport it back to the body's liver for processing. Consuming trans fats lowers the body's HDL levels:



Bad cholesterol

Low-density lipoproteins (LDL) transport cholesterol throughout the body. As cholesterol builds up in the walls of the body's arteries, the arteries become narrow and hardened, reducing blood flow and leading to an increased chance of heart attack and stroke:



Are trans fats bad for you?

Consuming a diet high in trans fats can lead to high cholesterol levels in the blood, which can cause health conditions such as heart disease, heart attack and strokes.

Cholesterol

A fatty substance known as a lipid and is vital for the normal functioning of the body. It is mainly made by the liver but can also be found in some foods.

Having an excessively high level of lipids in your blood (hyperlipidemia) can have an effect on your health. High cholesterol itself does not cause any symptoms, but it increases your risk of serious health conditions

Heart Attack

Coronary Heart Disease (CHD) is the leading cause of heart attacks. CHD is a condition in which coronary arteries (the major blood vessels that supply blood to the heart) get clogged up with deposits of cholesterol. These deposits are called plaques.

Stroke

A serious, life-threatening medical condition that occurs when the blood supply to part of the brain is cut off. If the supply of blood is restricted or stopped, brain cells begin to die. This can lead to brain injury, disability and possibly death.

What we can do to reduce/avoid the intake of Tran Fats?

Trans fat, whether of plant or animal origin, are nonessential and provide no benefit to human health. We should include our diet with Monounsaturated and Polyunsaturated Fats instead of Tran Fats and consume less of Saturated Fats. Monounsaturated and Polyunsaturated Fats can increase High-Density Lipoprotein (HDL) and decrease Low Density Lipoproteins (LDL).

Sources of Monounsaturated and Polyunsaturated Fats:

- Salmon
- Sardines
- Mackerel
- Avocado
- Sunflower oil
- Soybean oil
- Canola oil
- Olive oil
- Corn oil
- Walnuts
- Almond
- Brazil nuts
- Pine nuts
- Flaxseeds
- Sunflower seeds
- Oatmeal
- Whole grains
- Wheat



KEEP IN MIND that any type of fat is still high in calories. To avoid additional calories, substitute polyunsaturated and monounsaturated fats for saturated fats and trans fats rather than adding these fats to your diet.

A healthy lifestyle involves keeping your heart healthy as well as maintain a healthy weight, Among them, choosing a healthy balanced eating plan and regular exercise routine involving cardio and resistance training.

- **Regular exercise helps increase HDL. This helps the body to move fatty deposits to the liver for disposal rather than these hanging around and blocking arteries**
- **150 minutes a week of moderate-intensity exercise is recommended to help lower LDL. Examples of exercise includes fast walking/running, swimming and cycling**
- **Exercise can also help with weight loss, which in turn helps to lower LDL**

