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# TRANS WHAT?



## What is trans fat?

The simplest description of trans fat, or trans fatty acid, is “solidified oil”. The liquid oil solidifies because of changes in the way fatty acids are held together. The solidification occurs through natural bacterial action in the stomach of ruminant animals – sheep, cows, goats and camels – or by partial hydrogenation of vegetable oils during food manufacturing.

Naturally occurring trans fats are found in the meat, milk and dairy products of ruminants. Industrially produced trans fats result from the partial hydrogenation of unsaturated fatty acids (vegetable oils) to create semi-solid, easy-to-spread fats, such as margarine and other fats used in food manufacturing, baking and frying. Heating oils at very high temperatures also causes partial hydrogenation, so fried foods are potentially important sources of trans fat in the diet.

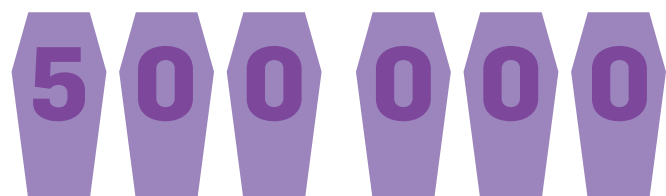
Industrial hydrogenation of vegetable oils increases their stability and solidity, thus increasing the shelf life of the final product while decreasing the need for its refrigeration. Hydrogenated oils became popular also because they give a desirable texture and taste to food.

## Harmful effects of trans fats

Not all that glitters is gold... Eating trans fat increases the risk of developing heart disease and stroke. Globally, trans fats are estimated to contribute to more than 500 000 deaths from cardiovascular disease every year.

The mechanism by which they increase cardiovascular disease risk is not clear, but one hypothesis is that they interfere with the metabolism of essential fatty acids, causing increased levels of the so-called “bad” cholesterol and reduced levels of the “good” cholesterol. The bad cholesterol is what clogs up the arteries and leads to cardiovascular disease. Trans fats are also associated with a higher risk of developing type 2 diabetes, but the mechanism remains unclear, and results from studies are conflicting.

## More than



deaths every year

## Sources and how to limit the intake of trans fat

The contribution of naturally occurring trans fats to total consumption is minimal. Industrially produced trans fats are the main source of dietary consumption in margarine, deep-fried foods, fast foods and cakes, pastries and chocolates. Tips to limit trans fat intake include:



Avoid foods that contain industrial trans fats – cakes, cookies and desserts (often made with margarine or shortening); pizza; processed and fatty meats (sausages, hot dogs, bacon, ribs); and ice cream.



Read food labels and avoiding foods that contain trans fat or partially hydrogenated oil.



Use monounsaturated fat (such as olive oil) and polyunsaturated fat (soybean, corn and sunflower oil) in recipes that call for fat.



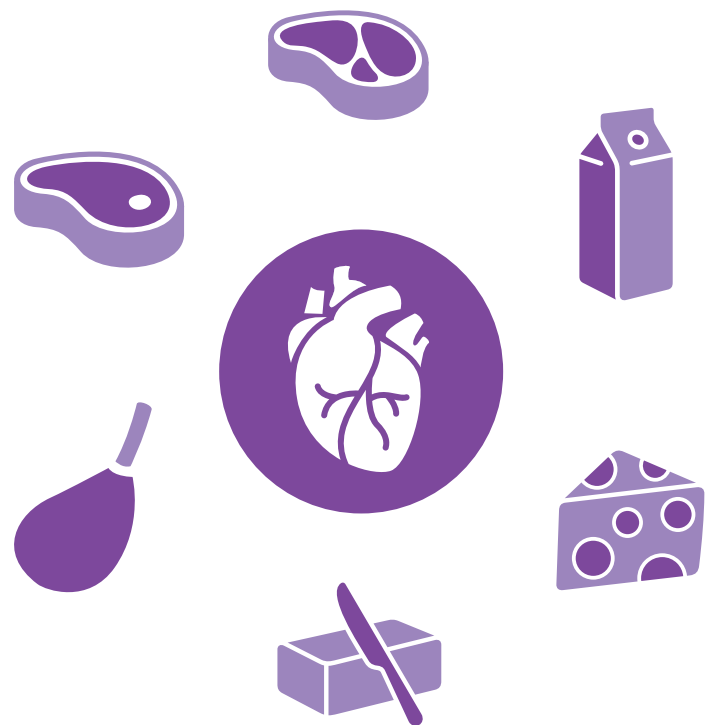
Eat a balanced diet rich in fruits, vegetables, whole grains, lean sources of protein and dairy products.



Avoid the use of reheated oil when cooking and frying foods.

## About saturated fats

Saturated fats come mainly from meat and dairy products – fatty beef, pork, lamb, lard, butter, ghee, cream and cheese. Plant sources of saturated fat are palm and coconut oils.



Saturated fats, like trans fats, increase levels of the bad cholesterol in the blood and therefore increase the risk of cardiovascular disease.