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# Trans Fat Help

## Trans Fat Q&A

- What is industrially produced trans fat?
- How are industrially produced trans fats formed?
- Why is industrially produced trans fat harmful to health?
- What are the more common food sources of industrially produced trans fat?
- What is naturally occurring trans fat?
- Is naturally occurring trans fat as harmful to health as industrially produced trans fat?



### What is industrially produced trans fat?

It is a type of dietary fat. Most of the trans fat in our diet is industrially produced, which is more harmful to heart health than any other ingredient in our food.<sup>1</sup>

### How are industrially produced trans fats formed?

Industrially produced trans fats can be formed through several industry processing methods:

- Partial hydrogenation, a process used to change liquid oils into semi-solid and solid fats, creates the majority of industrially produced trans fat in the Canadian food supply.
- Commercial refinement of some liquid vegetable oils such as canola, soybean and fish oils causes a small amount of industrially produced trans fat to form.<sup>2</sup>
- Deep-fat frying can create a small amount of industrially produced trans fat if oils are not used properly (0.2 – 1% of total fat content). This can be kept to a minimum if fry oil is used at appropriate temperatures and within its lifespan. See **Guidelines for Deep Fryers and Frying Oil**.
- The BC trans fat regulation restricts industrially produced trans fats that are formed by the partial hydrogenation process only.

### Why is industrially produced trans fat harmful to health?

Trans fat increases the risk of heart disease more than any other type of dietary fat. Trans fat not only raises LDL (bad) cholesterol, but also lowers HDL (good) cholesterol, both of which are strongly associated with heart disease.<sup>3</sup> A high consumption of trans fat is responsible for an estimated 3,000 deaths from heart disease every year in Canada.<sup>4</sup>

### What are the more common food sources of industrially produced trans fat?

Food that has “hydrogenated,” “partially hydrogenated,” “margarine”, or “shortening” as an ingredient may contain industrially produced trans fat.

Common food sources of industrially produced trans fat are seen in:

- **Cooking and Frying**
- **Baking**
- **Ready-Made foods**

### What is naturally occurring trans fat?

Naturally occurring trans fat is made by bacteria in the stomach of ruminant animals such as cows, sheep, goats,

bison, and deer. It is found in small amounts in the meat and dairy products of these animals.

### Is naturally occurring trans fat as harmful to health as industrially produced trans fat?

Several studies have found that there is not the same harmful effect to heart health as with industrially produced trans fat.<sup>5,6,7</sup> However, meat and dairy products are often high in saturated fat, which is harmful to heart health. Canadians can lower their risk of heart disease by choosing lower fat dairy products and lean meats according to **Eating Well with Canada's Food Guide**.



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<sup>1</sup> **TRANSforming the Food Supply**. Ottawa: Minister of Health; 2006.

<sup>2</sup> **Health Canada website**

<sup>3</sup> **TRANSforming the Food Supply**. Ottawa: Minister of Health; 2006.

<sup>4</sup> "Estimates based on Harvard School of Public Health data found in the following study: Ascheria A, Katan MB, Zock PL, Stampfer MJ, Willet WC. Trans fatty acids and coronary heart disease. *NEJM* 1999;340(25): 1994-8."

<sup>5</sup> Brouwer IA, Wanders A J, Katan MB. Effect of animal and industrial trans fatty acids on HDL and LDL cholesterol levels in humans - a quantitative review. *PloS ONE*. 2010; e9434, 5(3): 1-10.

<sup>6</sup> Uauy R, Aro A, Clarke R, Ghafoorunissa R, L'Abbe M, Mozaffarian D, Skeaff M, Stender S, Tavella M. Review. WHO Scientific update on trans fatty acids: summary and conclusions. *European Journal of Clinical Nutrition*. 2009; 63: S68-S75.

<sup>7</sup> Food and Nutrition Board, Institute of Medicine of the National Academies (2005). Dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids (Macronutrients). National Academies Press. pp.i. [www.nap.edu/openbook.php?isbn=0309085373](http://www.nap.edu/openbook.php?isbn=0309085373)