



Healthy alternatives to **trans-fats**

What are trans-fats?

- Trans-fats are unsaturated fatty acids that are either natural (such as lard) or artificial (industrially produced) such as shortening and margarine.
- Naturally occurring, trans-fats come from ruminants, while industrially produced trans-fats are formed through an industrial process that adds hydrogen to vegetable oil converting the liquid into a solid, resulting in partially hydrogenated oil (PHO).
- Industrially produced trans-fats are often found in processed foods due to their ability to spread easily and make food last longer and the fact that they are cheaper than healthier oils.

What is Difference between saturated, unsaturated fats and trans-fats?

- Saturated fats are solid at room temperature. Their sources include butter, cheese, palm oil, palm kernel, fatty pieces of meat such as pork fat and lard and coconut products such as milk and oils.
- Unsaturated fats are liquid at room temperature. They are found in corn oil, peanut oil, sesame, soybean oil, sunflower oil, safflower oil, olive oil, cotton seed, oil fish and seafood.
- Trans-fats are semi-solid at room temperature hence easy to spread. They are found in margarine, foods fried using partially hydrogenated oils such as doughnuts, fast food, baked goods such as crackers, cookies, pies and biscuits. Fried street

and restaurant foods often contain industrially produced trans-fat as well.

What is the benefit of consuming trans-fat?

- Trans-fat has no known health benefits.
- WHO is recommending limiting consumption of trans fat (industrially produced and ruminant) to less than 1% of total energy intake, which translates to less than 2.2 g/day for a 2000-calorie diet, and to eliminate trans fats from the global food supply by 2023.

What is the health impact of consuming foods that contain trans-fat?

- Industrially produced trans-fats consumption is associated with increased risk of diabetes, cardiovascular diseases and obesity¹. Treating these avoidable illnesses is expensive and unaffordable by many.
- World Health Organization attributes about 540 000 deaths each year to industrially produced trans-fats. High consumption of trans-fat increases the risk of death from any cause by 34%, and coronary heart disease deaths by 28%². These deaths can be avoided by understanding what saturated and unsaturated fats are and their sources.
- Several studies have linked their consumption to increase in the amount of Low-Density Lipoprotein, also known as “bad cholesterol”, triglyceride levels,

1 Pipoyan, D., Stepanyan, S., Stepanyan, S., Beglaryan, M., Costantini, L., Molinari, R., & Merendino, N. (2021). The Effect of Trans Fatty Acids on Human Health: Regulation and Consumption Patterns. Retrieved from <https://doi.org/10.3390/foods10102452>

2 <https://www.who.int/news-room/questions-and-answers/item/nutrition-trans-fat>

increased insulin resistance and decrease in the High-Density Lipoprotein “good cholesterol”³.

What healthy oils should be used instead of trans-fats?

- The removal of partially hydrogenated oils (PHO) results in substantial health benefits, with the greatest advantage obtained when replaced by oils rich in polyunsaturated fatty-acids (PUFA), followed by oils rich in monounsaturated fatty-acids (MUFA)⁴.

- The choices of fats and oils used in many countries will be influenced by availability, cost of the replacement alternatives and the oil industry’s capacity to innovate.

Sources of monounsaturated fats: Seeds such as sesame seeds; Nuts such as peanuts, almonds, hazelnuts; Vegetable oils such as olive, canola and avocado.



Sesame seeds



Almond seeds

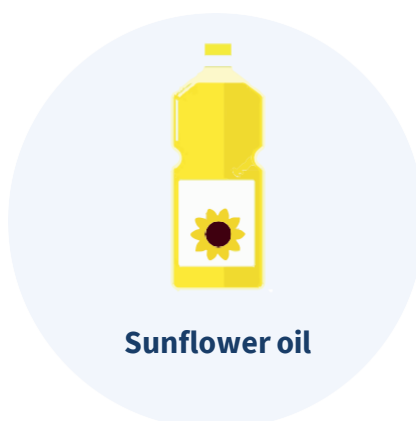


Avocado

Sources of polyunsaturated fats: Fish such as herring, salmon, tuna mackerel; Nuts such as walnuts; and Vegetable oils such as corn, cotton seed, safflower, sunflower, soybean.



Walnuts



Sunflower oil



Soybean oil

3 Bhat S, Maganja D, Huang L, Wu JHY, Marklund M. Influence of Heating during Cooking on *Trans* Fatty Acid Content of Edible Oils: A Systematic Review and Meta-Analysis. *Nutrients*. 2022 Apr 2;14(7):1489. doi: 10.3390/nu14071489. PMID: 35406103; PMCID: PMC9002916

4 Mozaffarian D, Clarke R. Quantitative effects on cardiovascular risk factors and coronary heart disease risk of replacing partially hydrogenated vegetable oils with other fats and oils. *European Journal of Clinical Nutrition*. 2009;63(S2):S22.of contents with essential fatty acids



Take away tips

- **Choose food carefully** ensuring the oils that they contain are unsaturated.
- **Avoid highly processed snack foods, baked products and fried foods** because most processed foods contain industrially produced trans fats, are high in calories but low in nutrients.
- **Always check for the presence of trans-fats in the ingredient list** and whenever the food is labelled “Trans-fat free” check for sugar, salt, saturated and total fats.
- **Instead of solid fats, cook or bake with liquid oils.** If possible, choose oils rich in monounsaturated and polyunsaturated fats (for example, oils from sesame seeds, peanuts, almonds, hazelnuts, walnuts, olives, canola and avocado).
- **Limit consumption of fast foods** since most are prepared using industrially produced trans-fats. The healthiest food is the one you have prepared at home and are aware of the oils used.
- **Make sure children and adolescents limit the consumption of processed foods high in trans-fats** by replacing them with healthier food choices. Make the youth aware of their food options.

Parting shot

You are what you eat, consider consuming healthy foods that are made or cooked using unsaturated oils rather than trans-fats.