

Fats

There are several types of fats. The human body makes some fat, but we also get fat from the food we eat. These are called dietary fats and they have many benefits. They provide energy for the body, support the growth of cells, help protect our organs, assist in keeping our bodies warm, aid in the absorption of nutrients, and produce crucial hormones. Fats also help vitamins dissolve in our bodies since some vitamins can't dissolve without fat.

The energy content of fats is high: nine calories per gram of fat versus only four calories per gram of carbohydrates and proteins. Because of this, we must watch our fat intake as surplus calories lead to weight gain which, if excessive, can lead to health problems. Generally, fats fall into three broad categories: **unsaturated**, **saturated**, and **trans**.



Unsaturated Fats

Unsaturated fats, which are in liquid form at room temperature, are good for the body. An unsaturated fat is a fat or fatty acid in which there is one or more double bond in the fatty acid chain. They can improve cholesterol levels in the blood, ease inflammation, stabilize heart rhythms and decrease the risks of both type 2 diabetes and coronary artery disease. Eating unsaturated fats in place of carbohydrates has been shown to decrease bad cholesterol, increase good cholesterol, lower blood pressure, and reduce the risk of heart problems.

Also, unsaturated fats help people with diabetes by providing better blood sugar control. The most common type of diabetes is type 2 diabetes wherein the body cannot use insulin properly. Insulin's job is to regulate blood sugar levels. In people with type 2 diabetes, blood sugar levels rise dangerously and uncontrollably. And since sugar builds up in the blood instead of cells, cells can become starved for energy. Over time, high blood sugar levels can damage the eyes, kidneys, nerves, and/or heart. By improving insulin levels, unsaturated fats lead to better blood sugar control.



Unsaturated fats are generally found in plants (e.g. vegetable oils, nuts, and seeds). There are two types of unsaturated fats: monounsaturated and polyunsaturated.

Monounsaturated: A monounsaturated fat is a fat that contains one double bond. These are found in olive; peanut; and canola oils, avocados, nuts (e.g. almonds, hazelnuts, pecans); and seeds (e.g. pumpkin and sesame). These are the fats that help improve insulin levels.

Reading Sample



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reaction). Partial hydrogenation increases the stability of oils to make it last longer before going bad as well as make them more resistant to heat, so they are good for frying. Moreover, partial hydrogenation makes liquid oils at room temperature solid (e.g. margarine, shortening). Because of these characteristics, trans fats are commonly used in restaurants and food manufacturing.



Trans fats are even more unhealthy than saturated fats. They raise bad cholesterol and lower good cholesterol, cause inflammation (which can lead to heart disease, stroke, diabetes, and other chronic health problems), and contribute to insulin resistance. For every additional 2% of daily calories obtained from trans fats, your risk of coronary heart disease increases by 23%. In fact, if manufactured trans fats were removed from the US food supply, up to 200,000 heart attacks and related deaths could be prevented annually. As a result, the US food industry has been moving away from trans fats in recent years because of its adverse health effects; wherein many have managed to do so without increasing saturated fats. In June 2015, the US Food and Drug Administration banned artificial trans fats in foods, giving manufacturers 3 years to remove them from their products. Unfortunately, trans fats are on the rise in developing countries, leading to rise in cardiovascular problems.

Reading Comprehension Questions:

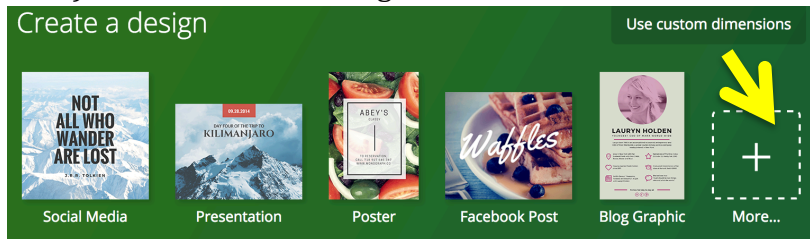
1. What
2. What
3. What are the two types of unsaturated fats?
4. What is the difference between monounsaturated and polyunsaturated fats?
5. Where
6. Which is the most unhealthy type of fat - unsaturated, saturated or trans fat and why?
7. What
8. Are fats good for your body?
9. How
10. How do

Extension Question

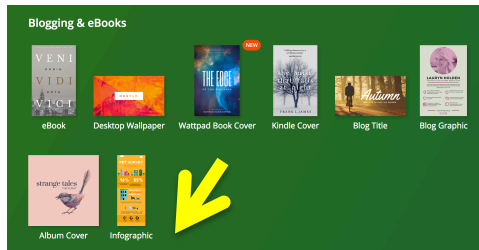
11. Create an infographic that compares the types of fats discussed in this article. Your infographic must be created online (unless otherwise instructed by your teacher). An excellent program to create your infographic is Canva.com. The account is free as are the infographic templates you can use.

How to:

- 1) Signup for an account at Canva.com
- 2) Under 'Create a design', choose 'More...'



- 3) Scroll down to 'Blogging and eBooks' and choose 'Infographic'



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- Mayo Clinic Staff. (2016, Feb 2). Dietary fats: know which types to choose. *Nutrition and healthy eating*. Retrieved from <http://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/fat/art-20045550?pg=1>.