

# FATS:

SATURATED, POLYUNSATURATED, MONOUNSATURATED,  
AND TRANS FATTY ACIDS

## FACTSHEET

- Fat supplies essential fatty acids (EFAs). Your body is incapable of producing the EFAs, known as linoleic acid and alpha-linolenic acid, so it must derive them from food.
- Vitamins A, D, E, and K are the fat-soluble vitamins which transports fat into and around the body.
- Fat is necessary for maintaining healthy skin, and it plays a central role in promoting proper eyesight and brain development in babies and children.
- For all the good it does, fat is often accused of the culprit in the battle of the bulge. It is easy to understand why. At 9 calories per gram, any type of fat -- good or bad -- packs more than twice the calories of carbohydrate and protein. Yet, it's a mistake to equate dietary fat with body fat. You can get fat eating carbs and protein, even if you eat little dietary fat.

### SATURATED FATS

These are the biggest dietary cause of high LDL levels (“bad cholesterol”). When looking at a food label, pay very close attention to the percentage of saturated fat and avoid or limit any foods that are high. Saturated fat should be limited to 10% of calories. Saturated fats are found in animal products such as butter, cheese, whole milk, ice cream, cream, and fatty meats. They are also found in some vegetable oils -- coconut, palm, and palm kernel oils. (Note: Most other vegetable oils contain unsaturated fat and are healthy.)

### UNSATURATED FATS

Fats that help to lower blood cholesterol if used in place of saturated fats. However, unsaturated fats have a lot of calories, so you still need to limit them. Most (but not all) liquid vegetable oils are unsaturated. (The exceptions include coconut, palm, and palm kernel oils.) There are two types of unsaturated fats:

- Monounsaturated fats: Examples include olive and canola oils.
- Polyunsaturated fats: Examples include fish, safflower, sunflower, corn, and soybean oils.

### TRANS FATTY ACIDS

These fats form when vegetable oil hardens (a process called hydrogenation) and can raise LDL levels. They can also lower HDL levels (“good cholesterol”). Trans fatty acids are found in fried foods, commercial baked goods (donuts, cookies, crackers), processed foods, and margarines.

### HYDROGENATED AND PARTIALLY HYDROGENATED FATS

This refers to oils that have become hardened (such as hard butter and margarine). Partially hydrogenated means the oils are only partly hardened. Foods made with hydrogenated oils should be avoided because they contain high levels of trans fatty acids, which are linked to heart disease. (Look at the ingredients in the food label.)

### Healthy Fats

When choosing fats, your best options are unsaturated fats: monounsaturated and polyunsaturated fats. These fats, if used in place of others, can lower your risk of heart disease by reducing the total cholesterol and low-density lipoprotein (LDL) cholesterol levels in your blood.

One type of polyunsaturated fat, omega-3 fatty acids, may be especially beneficial to your heart. Omega-3s appear to decrease the risk of coronary artery disease. They may also protect against irregular heartbeats and help lower blood pressure levels.

Type of healthy fat	Food source
Monounsaturated fat	Olive oil, peanut oil, canola oil, avocados, nuts and seeds
Polyunsaturated fat	Vegetable oils (such as safflower, corn, sunflower, soy and cottonseed oils), nuts and seeds
Omega-3 fatty acids	Fatty, cold-water fish (such as salmon, mackerel and herring), flaxseeds, flax oil and walnuts

## Fat Facts: What's Good About Fat

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- Fat is necessary for maintaining healthy skin, and it plays a central role in promoting proper eyesight and brain development in babies and children.
- For all the good it does, fat is often accused of the culprit in the battle of the bulge. It is easy to understand why. At 9 calories per gram, any type of fat -- good or bad -- packs more than twice the calories of carbohydrate and protein. Yet, it's a mistake to equate dietary fat with body fat. You can get fat eating carbs and protein, even if you eat little dietary fat.

## Harmful fats

Saturated and trans fats (trans-fatty acids) are less healthy kinds of fats. They can increase your risk of heart disease by increasing your total and LDL ("bad") cholesterol. Dietary cholesterol is not technically a fat, but it is found in food derived from animal sources. Intake of dietary cholesterol increases blood cholesterol levels, but not as much as saturated and trans fats do, and not to the same degree in all people.

Type of harmful fat	Food source
Saturated fat	Animal products (such as meat, poultry, seafood, eggs, dairy products, lard and butter), and coconut, palm and other tropical oils
Trans fat	Partially hydrogenated vegetable oils, commercial baked goods (such as crackers, cookies and cakes), fried foods (such as doughnuts and French fries), shortening and margarine
Dietary cholesterol	Animal products (such as meat, poultry, seafood, eggs, dairy products, lard and butter)

## Daily limits for fat intake

The U.S. Department of Agriculture (USDA) and the Department of Health and Human Services (HHS) recommend that fat make up no more than 35 percent of your daily calories. This means that if you consume 1,800 calories a day, eat no more than 70 grams of fat daily. (To calculate:  $1,800 \times 0.35 = 630$  calories,  $630/9 = 70$  g total fat) Keep in mind, however, that this is an upper limit and that most of these fat calories should come from *monounsaturated* and *polyunsaturated* sources.

Type of fat	Recommendation
Saturated fat	Less than 10 percent of your total daily calories
Dietary cholesterol	Less than 300 milligrams a day

Though the USDA and HHS haven't yet established an upper limit for trans fat, they do suggest that you keep your trans fat intake as low as possible. The American Heart Association, has set an upper limit for trans fat — no more than 1 percent of your total daily calories. For most people, this is less than 2 grams a day.

Many foods contain different kinds of fat and unfixed levels of each source. For example, butter contains unsaturated fats, but a large percentage of the total fat is saturated fat. And canola oil has a high percentage of monounsaturated fat, but also contains smaller amounts of polyunsaturated fat and saturated fat.

## Fat Facts: What's Bad About Fat

- There is a well-established link between fat intake and heart disease and stroke risk.
- Diets rich in saturated fat and trans fat (both "bad" fats) raise blood cholesterol concentrations, contributing to clogged arteries that block the flow of oxygen-rich blood to the heart and brain.
- But there's a caveat: Very low-fat diets -- 15% or 34 grams of fat in a 2,000-calorie diet -- may not reduce artery-clogging compounds in the bloodstream in everyone. Nor can most people maintain a very low-fat diet in the long run. The American Heart Association (AHA) recommends that we get 20% to 35% of our calories from fat. Most Americans get 34% or more.
- When it comes to dietary fat, quantity and quality both count.

## Choosing the best types of fat

Limit fat in your diet, but do not try to eliminate it entirely. Focus on reducing foods high in saturated fat, trans fat and cholesterol, and choose supplementary foods made with unsaturated fats. Consider these tips when making your choices:

- Saute with olive oil instead of butter.
  - Be Aware of Smoke Points: The smoke point also marks the beginning of both flavor and nutritional degradation.
    - 225 F: Canola Oil
    - 320 F: Olive Oil
    - 325 F: Vegetable Oil
- Use olive oil in salad dressings and marinades. Use canola oil when baking.
- Sprinkle slivered nuts or sunflower seeds on salads instead of bacon bits.
- Snack on a small handful of nuts rather than potato chips or processed crackers. Or try peanut butter or other nut-butter spreads — nonhydrogenated — on celery, bananas, or rice or popcorn cakes.
- Add slices of avocado, rather than cheese, to your sandwich.
- Prepare fish such as salmon and mackerel, which contain monounsaturated and omega-3 fats, instead of meat one or two times a week.

Monounsaturated and polyunsaturated fats have few adverse effects on blood cholesterol levels, but you still need to consume all fats in moderation. Eating large amounts of any fat adds excess calories. Make sure that fatty foods don't replace more nutritious options, such as fruits, vegetables, legumes or whole grains.

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