Dear Curious,

The "good fat/bad fat" you've heard about refers to fat's potential to cause disease. All fats have the same amount of calories, but they vary in their chemical compositions and effects on health. Fats are made of chains of carbon and hydrogen atoms. The saturation refers to whether all the available spaces on the carbon chain are bonded to hydrogen atoms, or if there are any hydrogen atoms missing. The three forms of fat found in nature are:

**Saturated Fats**
These fats have all of their carbon atoms filled (saturated) with hydrogen. Saturated fat is primarily found in high-fat cuts of meat, poultry with the skin, whole and 2 percent dairy products, butter, cheese, and tropical oils: coconut, palm, and palm kernel. Our body needs a small amount (about 20 grams) of saturated fat each day, but the typical American diet usually exceeds that amount. Too much saturated fat may cause a person's bad cholesterol (LDL) to rise and may also increase the risk of developing certain types of cancer. You can look for the amount of saturated fats in a serving of food on the nutrition label, under the heading "Saturated Fat" below the larger heading of "Total Fat."

**Monounsaturated Fats**
These fats have one space missing a hydrogen atom, instead containing a double bond between two adjacent carbon atoms. Monounsaturated fat is found in olive oil, canola oil, peanut oil, and in most nuts and nut butters. This type of fat does not cause cholesterol to increase. When a person substitutes monounsaturated fat for saturated fat, it helps to lower the bad cholesterol and protects the good cholesterol (HDL) from going down. The amount of monosaturated fats (and
polyunsaturated fats, see below) is not listed separately on the food label, but it
can be calculated by subtracting the saturated and trans fats (see below) from the
total fat.

**Polyunsaturated Fats**
These fats have more than one hydrogen atom missing in the carbon chain and
therefore contain more than one double bond. The two major categories of
polyunsaturated fats are Omega-3 and Omega-6 fatty acids. Omega-3 means
there is a double bond in the third space from the end of the carbon chain. These
fats are extremely healthful in that they protect against sudden death from heart
attack. They can also help people lower their triglycerides. Omega-3s are used by
the body to produce hormone-like substances with anti-inflammatory effects. The
best sources of Omega-3s are fatty fish, such as salmon, sardines, mackerel,
herring, and rainbow trout, among others. Canola oil, walnuts, and flaxseed also
contain some Omega-3s.

Omega-6 fats have a double bond in the sixth space from the end of the carbon
chain. These fats are found in oils such as corn, soybean, cottonseed, sunflower,
and safflower. Omega-6 fatty acids are used in hormone-like substances that
promote inflammation. Replacing saturated fats with Omega-6 fats may reduce
levels of total, bad, and good cholesterol. Many health experts suggest that the
ratio of Omega-6 to Omega-3 fatty acids should be 4:1 for optimal health. (Most
Americans get 14 - 20:1 ? a lot more than needed!) These fats are not listed
separately on the food label.

The other type of fat that is found in food, but isn't natural, is:

**Hydrogenated Fats (also known as Trans Fats)**
These are manufactured by adding hydrogen to a polyunsaturated fat, making it
solid at room temperature. However, instead of having the qualities of a
polyunsaturated fat, it takes on some of the traits of a saturated fat. In the past,
trans fats were widely used in foods as a replacement for saturated fats. Then it
was discovered that trans fat was even worse than saturated fat in terms of its
effects on health. In addition to raising LDL cholesterol, as saturated fat does, it
also decreases the level of HDL cholesterol.

Many companies have found ways to eliminate trans fats from their products and
all companies are now required to list the amount of trans fats on the nutrition
label. Be aware that products containing half a gram or less of trans fat per serving
are allowed to report zero grams of trans fat on the nutrition label. The best way to
check for trans fat is to read the ingredients label; if you see the words "partially
hydrogenated" or "hydrogenated" in front the word oil, the food probably has a
small amount of trans fat. This doesn't mean you shouldn't eat the food, but you
should limit the amount you eat ? a little can add up to a lot. Some foods contain
small amounts of naturally-occurring trans fats, but these fats, unlike man-made
trans fats, probably do not increase the risk of heart disease and other conditions.
Moreover, some manufacturers are now replacing trans fat with saturated fats, so
be sure to check the nutrition label to keep your total intake of unhealthy fats in
Although too much can have negative results, fats are certainly required for good health. Here are some of the positives—fats:

- Carry flavors
- Impart desirable textures—smooth, creamy, and crispy, to name a few
- Give us a sense of fullness and satisfy hunger
- Are needed to absorb and store certain vitamins and plant chemicals
- Can contribute to a person's enjoyment of food
- Are essential building blocks in cell production, maintenance, and repair
- Provide and store energy for the body's use

Bear in mind, though, that the calories from fat can add up fast since they are more concentrated in fat than in protein or carbohydrate. Also, as mentioned above, consuming too much saturated and trans fat may result in negative health consequences in some people. The secret is not to stay to one extreme or another; try to be flexible in your fat intake. What does that mean? Balance your meals and snacks. If you find you have a high fat meal (especially high in saturated fat), make the next one lower in fat. Or, if you choose a higher fat food, complement it with a lower fat one. We don't have to live an "all or nothing" philosophy when it comes to fat.

Alice!
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