

The Skinny on Fats

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For years we have been told that fats are the “bad guys” of the diet story. Yet science tells us that there are good oils--not just less-bad-for-you oils, but oils that positively improve health in many unexpected ways. Trying to figure out "who is who" in this story has been difficult for the public; over the years, scientists change their views regularly. Polyunsaturated oils such as safflower and sunflower apparently were the “good guys” in the fat realm for some time, only to be discredited later as possibly leading to cancer. More recently, olive oil has been the favorite, but the oil story is not that simple.

To appreciate the specific roles that different fats or AKA fatty acids have on health, it is first useful to understand their basic chemical structure. Fatty acids are long chains of carbon atoms bonded to each other by hydrogen atoms. The fatty acid molecules are grouped as saturated or unsaturated.

A saturated fatty acid has one hydrogenated bond between each pair of carbon atoms in the chain. It is literally “saturated” with hydrogen atoms. These hydrogen bonds hold the molecule stable. Saturated fatty acids come from animal sources, such as meat, dairy, butter, and lard as well as coconut and palm oil and stay solid at room temperature.

An unsaturated fatty acid has two bonds, called double bonds, between some of its carbon-atom pairs. This double bond takes the place of the hydrogen bond. Unsaturated fatty acids can be further divided into two groups: monounsaturated and polyunsaturated fatty acids.

“Mono”, means one therefore, monounsaturated fatty acids have a double bond between only one carbon-atom pair, making them a flexible molecule such as oil, which doesn't stay solid at room temperature. They are found mainly in plant foods, such as olive, canola, and peanut oils. Monounsaturated fats are the best choice because they lower LDL cholesterol without lowering HDL “good” cholesterol.

“Poly” means many, so polyunsaturated fatty acids have a double bond between more than one carbon-atom pair, making them a very flexible molecule. Some polyunsaturated fats such as flax seed oil don't even stay solid in the freezer. Polyunsaturated fat, found in sunflower, corn, soybean, and safflower oils, as well as in some fish, has been linked to decreasing total blood cholesterol by lowering LDL.

Omega-3 fatty acids, which may help lower the risk of heart attacks, are highly polyunsaturated and are found mostly in seafood. Omega-6 fatty acids are also polyunsaturated, and they function to protect the body's cells. Sources of omega-6 fatty acids include whole grains, vegetable oils, seeds, and nuts.

There are three elements that can break these delicate unsaturated oil molecules: heat, light and oxygen. The more unsaturated the molecule the less stable and vulnerable to breaking these molecular bonds. This will cause these oils to become rancid and produce toxins and free radicals that can be detrimental to good health causing inflammatory and degenerative disease.

A word of caution: Omega-3-rich oils are highly polyunsaturated. This means that unless they are very, very fresh, they--like other polyunsaturates (safflower and sunflower oils, for example)--may deteriorate in such a way as to cause harmful effects in our bodies. The bottom line: refrigerate and consume within a few weeks any flax seed oil or seeds. Buy walnuts still in the shell, and preferably vacuum-packed for freshness.

It is partly because of the freshness issue that monounsaturated oils, such as olive, have become so popular. Their chemical structure is such that they remain stable--that is, they do not oxidize--as readily as do polyunsaturates. As with other mono-unsaturates, intake of olive oil reduces levels of the harmful form of cholesterol in the blood compared to more saturated oils.

When cooking with fats and oils it is important to do so in a manner that does not destroy them. Never consume any deep fried foods; they are all universally soaked with toxic isomers. Remember that if the oil starts to smoke it is too hot and it is being destroyed. Here is a list of cooking oils and a brief comment on them.

Olive Oil: Contains many mono-unsaturated fatty acids. It is good for pan frying but not good for deep frying. It will break-down and become rancid. Be sure to mix some water with it to prevent the oil from getting too hot.

Coconut Fat: Good for frying only if it is not hydrogenated. Frying with hydrogenated fats are extremely dangerous to your health. In addition to the trans-fatty acids of hydrogenated oils, they contain traces of metallic nickel which is used in the process of hydrogenation.

Clarified Butter: Very good for frying. Commercial users will find it to be more expensive than other oils.

Peanut Oil: Recommended for home or commercial use. You can use the same oil every day but it should not be used more than a few hours each day. It is suggested that you use only organic peanut oil as oil processed from moldy peanuts can be contaminated with aflatoxins, a known carcinogenic byproduct of the mold fungi.

Sunflower Oil: You can fry with this oil all day, but you cannot safely cool and re-use the oil. It needs to be disposed of at the end of the day.

Macadamia Nut Oil: A great new healthy alternative cooking oil is called MacNut™ oil. One of the great features of this oil is that it is low in saturated fats plus it has the ideal 1:1 ratio of omega 3 to omega 6 fatty acids. In addition, it has a smoke point of 410°F which makes it well suited for stir frying foods.

Canola Oil: Made from genetically engineered rapeseed and used extensively in restaurants. Registered with the EPA as an insecticide. There is much controversy surrounding this oil. From the research I've read related to this oil, I would suggest avoiding it

Refined Vegetable Oil: Totally devoid of nutrients and breaks down easily. Should be totally avoided. Even as a salad oil.

As long as polyunsaturated fats are left in their natural state, known as the cis form fatty acid, they are healthful, but when vegetable oils are removed from vegetables, they turn rancid rather quickly. So manufacturers use a chemical process that converts healthful polyunsaturated oils into cancer and heart attack-causing partially hydrogenated fats, also known as trans fatty acids.

For the most part fats that have undergone chemical alterations are referred to as "hydrogenated," "partially hydrogenated" and even "polyunsaturated." This process simply bubbles hydrogen gas through warm oils which were chemically and physically extracted from vegetable sources such as soybeans. The hydrogen bonds to the fat molecules so that oxygen can no longer interact with it. During hydrogenation, the oil changes from a clear liquid to a solid at room temperature.

When fats are hydrogenated something drastic happens to their vital and life-sustaining characteristics. Hydrogenation destroys the nutritive value of the fat and creates a slow-developing toxicity demonstrated to be involved in (if not totally responsible for) diverse diseases including heart diseases and cancer, the two leading causes of death.

These "pseudo fats" are also referred to as "polyunsaturated." If that word sounds familiar it is. It's the same word repeated millions of times in TV commercials designed to dupe you into believing that hydrogenated fats are really healthy. Nothing could be farther from the truth.

Fat has many duties in our bodies. In order to maximize good health, we need avoid all refined and hydrogenated fats and eat healthy mono and polyunsaturated fats. For more information on your health and dietary needs call us at Advanced Health Institute or go to our website @ www.advancedhealthinstitute.com.