



OPTIONS CENTER NUTRITION TOPIC



FATS

Fear of fats has unfortunately led to a carbohydrate craze from which we are now emerging. While not all fats are good, we certainly have to remember that not all fats are bad and some are even essential. The problem is that most Americans for the past 15 years have been eating the wrong kind.

Voices of reason were raised during the widespread media demonization of *all* fats, but they were not often heard. Looking back now, it's hard to understand how so many supposedly knowledgeable diet experts could deny that our good health, and even our lives, depends upon our consuming high-quality and protective fats like extra-virgin olive oil, canola, oil, flaxseed oil, fish oils, nuts, seeds and avocado.

Fats are primarily important because they slow down the digestion of carbohydrates into the system, thereby helping to keep insulin levels lower. Certain fats provide the essential fatty acids that become part of the hormones, the eicosanoids, which play a significant role in daily health. In addition, as our most concentrated energy source (supplying 9 calories per gram), fats make food taste good and release the hormone cholecystokinin (CCK) from our stomach to send a message of satiety to our brain when we have eaten sufficiently. Without that message, we continue to feel hungry. A little bit of fat goes a long way!

Plainly and simply, our bodies just couldn't function without fats. Perhaps this is why such prestigious organizations as the American Heart Association suggest that we should be consuming up to 30% of total calories from this essential nutrient. Fats are required for the production of hormones, facilitate oxygen transportation and calcium absorption, and assist in the absorption of the fat-soluble vitamins A, D, E (the premier antioxidant) and K. Fats nourish our skin, nerves, and mucous membranes. They provide essential fatty acids from the omega 6's (safflower and evening primrose oil) and the omega 3's (flaxseed oil and fish oil) which benefit the immune, cardiovascular, reproductive and central nervous systems. Furthermore, some of the more recent research suggests the omega 3's prevent blood clotting; repair tissue damage caused by clogged arteries; lower the rate at which the liver makes triglycerides; lower high blood pressure; and protect the body from autoimmune diseases, such as rheumatoid arthritis, in which the body is attacked by its own immune system.

White Fat Vs. Brown Fat

There are actually two kinds of fat in your body, white fat and brown fat. White fat is the kind of fat responsible for the blood curdling screams emitted from dressing rooms during swimsuit season. White fat, referred to as "stored energy," likes to reside in the thigh, buttock, and stomach regions of women. Brown fat, on the other hand, is located between the internal organs and the spine. Unlike white fat, brown fat is packed with mitochondria. Mitochondria is what makes brown fat a party in motion while white fat is the party waiting to happen. Ann Louise Gittleman, author of *Eat Fat, Lose Weight*, explains that "the body employs brown fat to convert calories into heat energy via the process of thermogenesis....it is only in brown fat that thermogenesis is the primary function" (p.76). Factors such as stress, environmental pollution, poor nutrition, viral infections, diabetes, alcohol consumption, and excess sugar and hydrogenated fat consumption can derail and throw brown fat functioning out of whack resulting in an increase in white fat. The omega oils, particularly omega-3 and omega-6, are known to help brown fats get back on track and cart out the excess white fat. Flaxseed oil and cold water fish oil are probably the most well-known sources of omega-3.

MAJOR FOOD SOURCES OF FATS

Both dietary and body fats are composed of a combination of one to three fatty acids and a molecule of glycerol, an alcohol. Fats are known as mono-, di-, or triglycerides, depending on their number of fatty acids. Fatty acids are the building blocks of fats, and at least two of them – linoleic and alpha-linolenic acid – are not made by the body and have to be obtained from food.

The structure of the fat molecule decides whether a fat is saturated or unsaturated. Saturated fats have all possible hydrogen atoms present. Unsaturated fats do not, and are called mono- or polyunsaturated, depending on whether they have one or more double bonds between adjacent carbon atoms. A simple way to tell the difference between them is that, at room temperature, saturated fats are solid and unsaturated fats are liquid. Another thing to keep in mind is that unsaturated fats do not, as a general rule, have fewer calories than saturated fats. Most fats are a mixture of saturated, polyunsaturated, and monounsaturated, with one kind predominating.

	Room Temperature	Refrigerated
Saturated fats (except tropical oils)	Solid	Solid
Polyunsaturated fats	Liquid	Liquid (except when hydrogenated)
Monounsaturated fats	Liquid	Semisolid or solid

Here is a listing of the major food sources for each fat group:

Saturates - Animal sources: beef, lamb, and pork fats (lard, tallow, suet), butter. **Vegetable sources:** coconut oil, cocoa butter, palm oil and palm kernel oil.

Monosaturates – Vegetable, legume, and seed sources: olive, avocado, almond, apricot kernel, peanut, canola, and high-oleic safflower and sunflower oils.

Polyunsaturates (omega 3). Animal sources: marine oils from salmon, mackerel, herring, cod, sardines, rainbow trout, shrimp, oysters, halibut, tuna, sablefish, bass, flounder, anchovies; cold-water fish such as trout and crappie. **Vegetable sources:** safflower, sunflower and corn oils, soyfoods, sesame, raw nuts and seeds, legumes, spirulina, leafy greens. **Botanicals:** flax, borage, evening primrose oil, and black currant seed oil.



Saturated Fats

Without a doubt, most people would agree that saturated fats are considered the “bad guy fats” in our diet because they have been connected with high cholesterol and hardening of the arteries. This notion, however, is not only simplistic but incorrect.

As Dr. Mary Enig, a leading expert on fats and oils from Silver Spring, Maryland, states in an interview with biochemist Richard Passwater, Ph.D. (*Whole Foods*, December, 1993): “The idea that saturated fats cause heart disease is completely wrong, but the statement has been ‘published’ so many times over the last three or more decades that it is very difficult to convince

people otherwise unless they are willing to take the time to read and learn what all the economic and political factors were that produced the anti-saturated fat agenda...”

Asked whether tropical oils, which are the saturated fats that were so diligently removed from commercially produced cookies and crackers a short while back, are harmful, Enig provides this surprising revelation: “Several studies have shown that there is no increase in heart disease in countries or communities where most of the fat is either coconut oil or palm oil. Palm oil that is not extensively refined has very high levels of antioxidants, and coconut oil has high levels of very useful medium chain fatty acids.”

The real villains causing our health problems may very well be vegetable fats in the form of processed vegetable oils, margarine, vegetable shortening and baked goods made from these products. A study conducted by Dr. Enig found that the use of animal fat has markedly decreased in the American diet for the past 80 years, falling from 83 percent to 53 percent of total fat intake. Conversely, there has been an enormous rise in vegetable fat intake, from 17 percent in 1910 to 47 percent in 1990. Enig has correlated the rise in vegetable fat consumption with the rise in cancer. Enig is especially concerned about vegetable fat in the form of the unnatural trans fats from hydrogenated and partially hydrogenated oil.

Trans Fats

Trans Fat, a processed fat pervasive in cookies, crackers and fast food, is created when ordinary vegetable oil is processed into partially hydrogenated oil. It is why stick margarine and Crisco stay solid at room temperature and what makes cakes moist, cookies fresh, and crackers crisp. It also occurs naturally in some meat and dairy products. A federal report on trans fat finds *there is no safe level* and recommends that people eat as little of it as possible.

Trans fats are now believed to be connected not only to cancer, heart disease (by lowering the HDL or good cholesterol levels) and aging, but also to immune system suppression and diminished ability to utilize essential fatty acids.

The latest government study confirms that trans fat is directly associated with heart disease and increases in LDL cholesterol, the kind that can clog arteries. Because of that, the Institute of Medicine, a branch of the National Academy of Sciences, declared there is no safe amount of trans fat in the diet.

A generation ago, when cardiologists waved Americans off saturated fats such as butter and beef tallow, partially hydrogenated oils became a preferred alternative. But during the late 1990’s, researchers started to discover that the trans fat could clog arteries as readily as saturated fat.

Some of the nation’s leading medical researchers also believe that high trans fat levels in the American diet may be why childhood obesity is on the rise, why diabetes is at record levels and why some people develop cancer and other related health problems.

“The only defense people have is to eat good fats and oils and fruits and vegetables,” Aron said.

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