

Everything you need to know about fat

Fat is an essential part of our daily food intake

Although fat has been consistently demonized by the media and even the so-called medical experts, the research is clear; we need fat to survive and to *thrive*. An important concept which is poorly understood by most people is that there is an optimal ratio of the different types of fats we should consume.

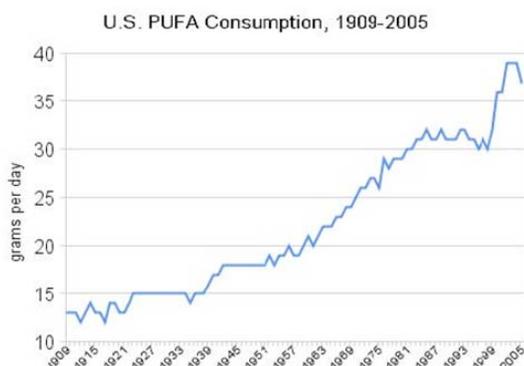
Fats have been a confusing topic in health ever since the 1950s when a study was published that fingered saturated fat as the villain in western societies' declining health status. As it turns out, that single study was hugely flawed and grossly inaccurate, however it has nonetheless been used for almost 60 years as the apparent proof that fat is "bad".

We need fats. They have three basic purposes in your body:

1. Providing energy
2. Providing the building blocks for cell membranes
3. Acting as raw materials that can be converted to other substances that perform special duties in your body - such as hormones.

Some facts about fat

FACT 1: Most people consume far too many Polyunsaturated Fatty Acids (PUFAs) usually in the form of vegetable oils. Consumption of PUFAs in the U.S. has gone from about 13 grams per day to nearly 40 grams per day over the past century (see figure below).



When consumed in excess, PUFAs will tend to create inflammatory processes in the body

We need a certain level of inflammation for healing from infections, injuries and even back and neck problems. However, when this inflammation continues unabated for longer than necessary, this is when problems occur. When there are too many PUFAs in the diet, the body will have trouble "switching off" this inflammatory process and the person may end up with chronic pain or disease.

Even worse is when the inflammation continues chronically but in the *absence of symptoms*. So the person has no idea there is a harmful systemic process occurring that will eventually lead to ill-health at some point in the future. This is because *chronic inflammation* is a part of every chronic disease prevalent in society today. This is the scenario when we hear of the person that says "I've been healthy my whole life and now I've got diabetes and arthritis and I don't know why".

It is clear westerners are consuming much more PUFAs than in previous years, and this is due in large part to the over-consumption of processed, packaged and restaurant foods. If you remove these from your diet and switch to only buying foods from the fresh vegetable, fruit, meats, seafood, nuts, seeds, eggs, unprocessed oils and dairy sections of the supermarket (or better yet - organic market), your ratios of fats almost automatically slips back into the optimal range. See the end of the article for a table on which fats will provide you with a better ratio.

FACT 2: Most people are consuming far too many Omega 6 fats compared to Omega 3. You need both types of fat in your diet, it isn't that one is "good" and the other is "bad", they are both *essential*, meaning your body can't make its own

so we need them from foods we eat. Both perform distinct biological functions and offer their own unique health benefits. Both are essential to health but the ideal ratio is somewhere between 5:1 to 1:1 but most westerners are consuming between 20:1 and even as high as 50:1. This spells big problems for long-term disease such as chronic inflammation, pain, cancer, diabetes, heart disease, arthritis, etc.

Omega-3 Fats

Plant Based: Alpha-Linolenic Acid (ALA), the only omega-3 found in plants (except for some algae). Foods rich in ALA include *flaxseed oil* (53 percent), *canola oil* (11 percent), *English walnuts* (9 percent). ALA is considered essential because your body can't make it, so you need it in your diet—or its long-chain derivatives (described below).

Animal Based: The longer-chain forms of omega-3 are found mostly in animals and they are **Eicosapentaenoic and Docosahexaenoic Acids (EPA and DHA)** and are highly unsaturated, mainly found in *fish, shellfish* and *krill*. DHA is the primary structural component of your brain and retina, and EPA is its precursor. Your body can make some EPA and DHA from short-chain ALA, *but does so inefficiently*. Recent studies suggest *less than one percent of ALA is converted*, if you are consuming the typical Western diet. DHA is found in cod liver oil, fatty fish, and in smaller concentrations in the organs and fats of land animals.

Omega-6 Fats

Linoleic acid (LA), which is the most prevalent PUFA in the Western diet, is abundant in corn oil, sunflower oil, soybean oil and canola oil (oils used in processed and restaurant foods)

Arachidonic acid (AA), which is an important constituent of cell membranes and important in combating infections, regulating inflammation, promoting blood clotting, and allowing your cells to communicate. AA is found in butter, cream, cheese, egg yolks, animal meats and seafood.

Most people are quite deficient in Omega 3 so it should be a priority to increase your levels. This is quite difficult to do simply with diet and therefore is one of the few supplements I believe most people should be taking daily. The most biologically available form is *krill oil*.

FACT 3: Processed oils contain completely unnatural and harmful *trans-fats* and *intersterified fats*. Trans-fats are formed when hydrogen is added to vegetable oil during food processing in order to make it solidify. This process, known as hydrogenation, makes fats less likely to spoil, so foods stay fresh longer, have a longer shelf life and also have a less greasy feel.

Trans-fats are common in foods like fried chips, fried chicken, doughnuts, cookies, pastries and crackers. In the United States, French fries typically contain about 40 percent trans-fatty acids.

These completely unnatural man-made fats cause dysfunction in your body on a cellular level. Studies have linked trans-fats to:

- Cancer: They interfere with enzymes your body uses to fight cancer.

- Diabetes: They interfere with the insulin receptors in your cell membranes.
- Decreased immune function: They reduce your immune response.
- Problems with reproduction: They interfere with enzymes needed to produce sex hormones.
- Obesity
- Heart disease: Trans-fats can cause major clogging of your arteries. (Among women with underlying coronary heart disease, eating trans-fats may increase the risk of sudden cardiac arrest three-fold!)

Trans-fat is also known to increase blood levels of low density lipoprotein (LDL), or "bad" cholesterol, while lowering levels of high density lipoprotein (HDL), or "good" cholesterol. Trans-fats even interfere with your body's use of beneficial omega-3 fats, and have been linked to an increase in asthma.

FACT 4: The rise and continued dominance in the market-place of reduced fat and fat-free products has dramatically increased the amount of refined carbohydrate - particularly sugar and fructose - being consumed.

When food manufacturers removed the fat to satisfy their advertising claim of 97% fat free or the like, they realised that the food now tasted quite bland. So to compensate for this loss, they add copious amounts of *sugar*.

When excess insulin is produced from eating too many carbohydrates, the body converts more of the Omega 6 fats to become inflammatory. Krill oil and other EPA containing oils may help to prevent this process.

It is clear that the simple solution to all the issues with the quality of fats and fat imbalance is to;

1. Eliminate all processed foods
2. Reduce grains, sugars and carbohydrates
3. Those calories you were consuming via processed foods before can now be replaced with *healthy fats and vegetables*.

Sources of healthy fats and oils

Olives and Olive Oil	Coconuts and Coconut oil	Butter made from organic grass-fed milk
Raw Nuts such as almonds, walnuts, pecans	Free range organic Eggs including the yolks	Avocado
Unheated organic Nut Oil	flax Seeds, chia seeds, sunflower seeds, sesame seeds, pumpkin seeds	Grass-fed Meats, Fish and Poultry

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