

The Importance of Dietary Fats

With regards to nutrition, fats are a poorly understood part of the equation. It can be a confusing topic that seems to overwhelm the majority of people and leave them guessing. The truth is that the right fats and oils can be some of the most rejuvenating and healing foods that one can choose to consume.

Some of the many potential benefits of consuming the right dietary fats include:

- Increased energy levels
- Stabilise blood sugar levels
- Better sleep
- Mood stabilisation
- Helps restore the integrity of cell membranes
- Increased mental clarity
- Faster healing and body repair
- Weight control



One cannot make sound decisions about fats without a minimum level of understanding and clarity so here goes nothing!

The first step is to realise that the right fats are beneficial, not harmful. Fats, and in particular saturated fats, have been unfairly villainized over the years. Even today, you can take a walk through your local grocery store and witness the low fat craze. People have turned so fearful of fats that they refuse to eat egg yolks, the skin on the chicken, avoid full fat milks and yogurts, and turn to margarine over butter.

This is simply the result of clever marketing by mega food industries and not a genuine concern for your health.

Learn to embrace fats and understand that if you are consuming a “low fat” product, then it is more than likely loaded with sugar. If, on top of being a low fat product, it also a “low sugar” product, then that sugar is replaced with chemical additives in the form of aspartame, sucralose, MSG, or some sort of equivalent.

Neither choice is a wise compromise.

A Short Chemistry Lesson

Saturated vs Unsaturated Fatty Acids

Individual fatty acids come in all shapes, sizes, and lengths. However, a fatty acid can always be categorised as either a saturated fatty acid or an unsaturated fatty acid. Saturated fats remain as their own family, while unsaturated fats can further be broken down into monounsaturated and polyunsaturated fatty acids.

Every individual fatty acid has the same general structure. It comprised of two parts: a fatty chain and an acid end [sometimes referred to as a carboxyl group (-COOH)]. That’s it. The fatty chain is nothing but a string of carbon atoms, surrounded by hydrogen, that can range anywhere from four (4) carbons all the way up to twenty-four (24) carbons long (which is why they can be further categorized as short, medium, or long chain fatty acids) and ends with a methyl (-CH₃) group.

If these carbon atoms are linked together through SINGLE bonds, then the fatty acid is carrying the maximum amount of hydrogen atoms that it can. In other words, it is SATURATED with hydrogen, hence a SATURATED fatty acid.

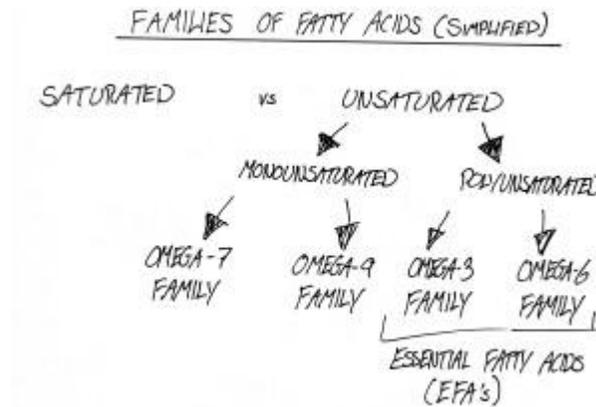
If there is ONE PAIR of carbon atoms linked together through a DOUBLE bond, then we have a MONOUNSATURATED fatty acid, since the prefix “Mono” implies ONE.

If there are TWO OR MORE PAIRS of carbon atoms linked together through a DOUBLE bond, then we have a POLYUNSATURATED fatty acid, since the prefix “Poly” implies two or more.

Furthermore, monounsaturated fats (one double bond between carbons) can come in the form of omega-7 and omega-9 fatty acids, while polyunsaturated fats (two or more double bonds between carbons) can come in the form of omega-3 and omega-6 fatty acids.

The simple reason they are referred to as omega 3, 6, 7, and 9 is where the first double bond begins (counting from left to right, the first double bond will begin either at the 3rd, 6th, 7th, or 9th carbon atom).

The full flow chart showing the different families of fatty acids is below:



What I have just explained to you are individual fatty acids. Three (3) of any combination of saturated, monounsaturated, and polyunsaturated fatty acids combined with one glycerol molecule create a triglyceride.

Triglycerides are the stored form of 'fat' in the body that flows through the bloodstream and what makes up the majority of adipose tissue (the visible fat that accumulates in the body).

Triglycerides are beneficial in that they provide insulation to help conserve heat in cold environments, serves as protection for internal organs, and are drawn upon and broken down into individual fatty acids for energy needed between meals, during exercise, during a famine, or a pregnancy.

An excess of triglycerides, however, can be detrimental. The body also has an incredible ability to modify, change, lengthen, or de-saturate (create double bonds) one fatty acid into another depending on what is needed at the time.

The Role Fats Play in the Diet

Saturated Fats – Are solid at room temperature and are predominately found in *animal fats* and *tropical oils*.

Sources of saturated fat include coconut oil, palm oil, palm kernel oil, butter, milk fat, beef, pork, and lard.

Saturated fats are the *most stable* under heat, light, and oxygen and because of that are recommended for cooking or frying [as opposed to unsaturated fatty acids such as vegetable oils (corn, safflower, and sunflower oil, etc) which are susceptible to oxidation and turn rancid when exposed to heat, light, and oxygen].

Short to medium chain saturated fatty acids serve as a source of energy, calories, and heat as they are easily digestible, while long chain saturated fatty acids are responsible for energy generation, the construction of cell membranes, or the body can converted these longer saturated fatty acids into unsaturated fatty acids if needed.

Monounsaturated Fatty Acids – Monounsaturated fatty acids (also known as omega-7 and omega-9 fatty acids) have a lower melting point than saturated fatty acids due to the existence of a single double bond. Small amounts of monounsaturated fatty can be found in *coconut oil and palm kernel oil*, while more prominent sources include *olive, avocado, almond, pecan, macadamia, and cashew*.

Polyunsaturated Fatty Acids – Polyunsaturated fats are the most fragile, but the absolute most important oils to consume.

They contain two or more double bonds and are *extremely susceptible* to light, heat, and oxygen (once exposed, they turn rancid and oxidize quickly). For this reason, they should **NEVER** be used to cook or fry foods with.

ESSENTIAL FATTY ACIDS:

Polyunsaturated fats are important because two fatty acids in particular are categorized as *EFA's, or essential fatty acids*. What this means is that our body cannot create these two EFA's from other fatty acids so we need to consume these fatty acids every day from quality sources and in the appropriate ratios.

Alpha-Linolenic Acid [LNA] (Omega-3 family) and **Linoleic Acid [LA](Omega-6 family)** are the two EFA's required by the human body.

From these two essential fatty acids, a healthy body can create all the other omega-3 fatty acid derivatives [*which include Stearidonic Acid (SDA), Eicosapentaenoic Acid (EPA), and Docosahexaenoic Acid (DHA)*] and omega-6 fatty acid derivatives [*which include Gamma-Lineolenic Acid (GLA) and Arachidonic Acid (AA)*] from LNA and LA.

Sources of LNA (omega-3) include *flax, chia, hemp, walnuts, salmon, trout, mackerel, and sardines*.

Sources of LA (omega-6) include *chia, hemp, flax, as well as unrefined sesame seed, sunflower, and safflower oils*.

ONE OF THE MOST IMPORTANT CONCEPTS TO UNDERSTAND REGARDING THE CONSUMPTION OF POLYUNSATURATED FATTY ACIDS – the RATIO of Omega 3:6

It is vitally important to consume omega-6 and omega-3 polyunsaturated fats in a 1:1 ratio (or as close to 1:1 as possible). Too much of one combined with the absence of the other can wreak havoc on the body.

What is common today is that the majority of the population tends to consume *WAY more omega-6 fatty acids* (in the form of vegetable oils or foods prepared using vegetable oils, such as potato chips, pastries, french fries, etc), without adequate consumption of *omega-3 fatty acids*.

This can create an imbalanced ratio between the two EFA's (*sometimes moving toward 20-30 times the amount of omega-6 in relation to omega-3 – eek!*).

The closer we can strive to a 1:1 ratio the better, although it is okay if we consume slightly more omega-6 than omega-3 fatty acids.

My recommendation is to get into the habit of consuming ***hemp seeds, chia seeds, and flax seeds*** (or a combination of the three) over the long term for an adequate omega-6 to omega-3 ratio.

Similarly, a high quality fish oil supplement works as an excellent alternative.

Unsaturated fatty acids (both monounsaturated and polyunsaturated) in the body play a role in the construction of cell membranes, electrical potentials, moving electrical currents, oxygen transfer, hemoglobin production, energy production, cell division, and brain development, while highly unsaturated fatty acids (i.e. polyunsaturated, or what are sometimes referred to as super-unsaturated, fatty acids) are incredibly vital to the brain, adrenal glands, nerve endings (synapses), sensory organs, and sex glands.

Practical Take Away Points Regarding Dietary Fats

If there is anything I want you take away from reading this article, it is the following five (5) points below:

1) Eat More Fat – Eat more fat in general – do not be afraid of dietary fats. There are countless benefits to eating both saturated as well as unsaturated fatty acids. Have more energy, feel fuller, and lose fat by EATING more fat! (Dietary fat will not make you fat in and of itself). There is no reason to ever put yourself on a low fat diet. It will cause more problems than it will solve.

2) Eat Lower Amount of Polyunsaturated Fats and be Mindful of your Ratio between Omega-6 to Omega-3 Fatty Acids

Polyunsaturated fats are beneficial to consume but everything needs to be considered in moderation. Stay as close as you can to a 1:1 ratio between omega-6 to omega-3 fatty acids and avoid foods containing a high amount of omega-6 fatty acids (such as potato chips, vegetable oils, and pastries).

3) Consume High Quality Unrefined Oils or (Even Better) Seeds

All fats are not created equal! Modern oil production can often involve *refining, degumming, bleaching, deodorizing, adding preservatives, and hydrogenation* which results in an unhealthy and rancid oil before it even makes it to the supermarket shelf where oils often sit in clear plastic bottles exposed to light day after day. Furthermore, once a container of fresh oil has been opened, it is wise to consume the oil promptly as they tend to deteriorate rapidly after being opened. For this reason, *seeds* are often a wise choice as the high quality oils remain protected by the seeds outer shell from light, oxygen, and heat. Furthermore, seeds contain protein, fiber, vitamins, minerals, and seed-specific ingredients that you will not find in bottled oils. Take the time to do your research and find the most wholesome unaltered fats and oils that nature has provided us for your own personal consumption.

4) Cook with Saturated Fats, Never Vegetable Oils

Vegetable oils become rancid when exposed to heat, light, and oxygen. Consuming rancid or damaged oils will encourage *inflammation* and accelerate the *degenerative process* inside the body. A much healthier alternative would be to cook with saturated fats such as butter, lard, coconut oil, or some sort of equivalent.

5) Consume Proteins and Oils Together

Protein and oils occur naturally in nature for a reason (eggs are accompanied with the yolk, while milk, yogurt, and poultry come equipped with fats for a reason). Eat these foods the way nature intended. Long term consumption of protein without oils or vice versa will prove costly sooner or later.

I hope that this has provided you with some *clarity and understanding, challenged your perception* of fats, and I hope that you will now be better equipped to make informed decisions about the fats you choose to consume on a daily basis.

A few last tips:

- Use natural foods and avoid as much processed food as possible, particularly foods that might contain hydrogenated fats.
- Use as varied a range of fats as possible, avoiding hydrogenated fats and being very careful when using essential fatty acids that these are not contaminated by trans- fatty acids.
- Remember that it is wrong to think of saturated (animal) fats as bad. They are at least as essential to the diet as unsaturated fats.
- When buying essential fatty acids, it is essential that they are prepared by a reputable supplier to ensure that they are pure and do not contain trans- fatty acids
- **Do not use margarine.**
- Avoid other hydrogenated oils like cooking oils and salad oils, and certainly do not cook with them.
- Do not use essential fatty acids for cooking (ie don't heat essential fatty acids).
- Do not use more essential fatty acids than you believe to be necessary - while the diet should include essential fatty acids, an excess may be positively harmful.
- Finally, it may be necessary to supplement the diet with special nutrients like lipase, carnitine and co-enzyme Q10 in order to facilitate the additional burden of fat processing imposed by a ketogenic diet.