



Fats That You Need

Up until about 200 years ago, the human diet contained much higher levels of omega-3 fatty acids. The meat of wild animals that forage for food is rich in EPA, unlike the meat of domesticated animals that have been fattened with grains. High levels of dietary omega-6 vegetable oils are a modern phenomenon. This process accelerated about 50 years ago as cattle began to be fed increasingly on grains rather than grass. Recommendations by nutritionists to eat margarine rather than butter (polyunsaturated rather than saturated fats) increased the trend toward omega-6 and trans fat consumption. Currently, the ratio of omega-6 to omega-3 fatty acids in the American diet is 7-to-1 or more. There are good reasons to believe that this imbalanced essential fatty acid ratio amounts of EPA and DHA has led to increased cancer, heart disease, allergies, diabetes and other afflictions.

It would seem prudent to reduce fat intake of nonessential fats to as low a quantity as possible, so long as absorption of oil-soluble vitamins is not impaired. Dietary fat could mainly consist of essential fats. The value of EPA or DHA to prevent serious heart problems should be enough to encourage anyone to take an amount of these nutrients up to 1% of total calories. For a person on a 2,500 calorie daily diet, this would mean 5 to 7.5 grams of essential fatty acids per day with perhaps 500 mg each of EPA and DHA. The essential fatty acids are named so because the body cannot produce them.

Essential Fatty Acids in the Diet

The primary source of omega-6 fatty acids in the diet is **linoleic acid** from the oils of seeds and grains. Sunflower, safflower and corn oil are particularly rich sources of **linoleic acid**, which is at the root of the omega-6 fatty-acid family. Evening primrose oil and borage oil are high not only in linoleic acid, but the omega-6 derivative gamma-linolenic acid (GLA). Avocado is 15-20% oil -- mainly monosaturated, but also high in linoleic acid. (Avocado has the highest fat content and the highest fiber content -- soluble as well as insoluble -- of any fruit.)

Omega-3 fatty acids are also essential fatty acids. They are essential to human health but cannot be manufactured by the body. For this reason, omega-3 fatty acids must be obtained from food.

Omega-3 fatty acids can be found in fish, such as salmon, tuna, and halibut, other marine life such as algae and krill, certain plants (including purslane), and nut oils. Also known as polyunsaturated fatty acids (PUFAs), omega-3 fatty acids play a crucial role in brain function as well as normal growth and development.

Alpha-linolenic acid, the primary dietary source of omega-3 fatty acids in the diet, is frequently found in green leaves. The leaves and seeds of the perilla plant (widely eaten in Japan, Korea and India) are the richest plant source of alpha-linolenic acid, although linseed oil is also a rich source. Fish oil contains very little alpha-linolenic acid, but is rich in the omega-3 derivatives EPA and DHA.



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If you are confused about the conflicting opinions and myths about dietary fat, you are not alone. One thing is clear: the type and amount of dietary fat that you eat can affect your health. Fatty acid profiling of your blood plasma or red blood cells reveals where different food consumption is needed to allow your body to function well.

What are fatty acids and why do I need them in my diet?

Fatty acids are the fats we obtain from our diet. They may be monounsaturated, polyunsaturated, or saturated. Fatty acids are found in oils and other fats that make up different foods. Fat is necessary for cell membranes, nerve coverings, hormone production, vitamin absorption, and more. Most of us get a lot of fat in our diet, but it usually is not the type of fat we should be getting.

What foods do I need to add to my diet to get fatty acids?

You should consume more “good” fats from fish, flaxseed, olive, vegetable and nut oils (omega- 3, 6, and 9 fats respectively) and less saturated oils and trans fats (or hydrogenated oils, the “bad” fats) contained in processed foods. The families of healthy fats called omega-3, omega-6, and omega-9 protect against heart disease and help skin and joints stay young and supple. Hydrogenated and partially hydrogenated oils often contained in shortening, margarine, and many baked goods, as well as excessive dietary saturated fats from animal products, can cause health problems on a cellular level and increase heart disease risk.

Research is revealing the long-term health benefits of consumption of fish oils and/or GLA rich oils on...

- Cardiovascular health
- Children’s health and development
- Female health and reproduction
- Immune health
- Joint and tissue formation
- Lifestyle and healthy living
- Mental/Neurological health

Signs/Symptoms of Essential Fatty Acid Deficiency:

- Small bumps on back of upper arms
- Thick or cracked calluses
- Dandruff
- Dry, dull, brittle hair
- Brittle fingernails
- Dry eyes
- Dry mouth/throat
- Inadequate vaginal lubrication
- Depression
- Menstrual cramps



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- Premenstrual breast pain/tenderness
- Excessive ear wax
- Excessive thirst
- Allergies
- Crave fats/fatty foods
- Stiff or painful joints
- Dry skin/ discoloration

Why should I test my fatty acids profile?

A fatty acid profile shows the balance of fats and metabolites in plasma. Your overall balance of omega-3 and omega-6 fats is represented by measurement of acid ratios. Balanced fatty acid levels are essential for optimal health. Fatty acid profiles are also an ideal way to track progress or response to a treatment, show varying patterns identifying essential fatty acid deficiency or excess, signs of insulin resistance, elevated level of triglycerides (fatty acids compounds), pro-inflammation, or omega-3 or 6- dominance. If you feel that you may be a good candidate for testing, please give our office a call at (303) 447-1339. Thank you.

Yours in Good Health!