



Nutrition Fact Sheet

Essential Fatty Acids (EFAs)

What are Essential Fatty Acids?

When anything in nutrition is termed 'essential' it means that our body does not manufacture the substance itself, it has to be taken in through the diet, and it is essential for our health and well-being.

Fatty acids are the basic building blocks of which fats and oils are made. They are occasionally also referred to as Vitamin F. These fats are vital to our well-being and must be supplied through the diet.

Why Do I Need EFAs?

Every living cell in the body needs EFAs. They are essential for the rebuilding and renewal of cells and are necessary for the body to produce prostaglandins, which are hormone-like substances needed for a wide variety of body processes. Many symptoms and diseases are associated with a deficiency of the right kinds of fats – they can reduce the risk of cancer, heart disease, allergies, Alzheimer's disease, arthritis, eczema, depression, fatigue, infections and PMS.

The essential fatty acids are vital for the structure and effective working of the brain and nervous system, the immune and hormonal systems, the cardiovascular system and the skin. The following are all known functions of the EFAs:

- needed to increase energy production
- improves energy level and stamina
- increases strength and endurance
- speeds up recovery time from fatigue
- helps balance blood sugar levels
- helps kidneys remove excess water
- balances hormones and prostaglandins
- helps behavioural problems
- prevent food cravings
- improves circulation
- increases metabolic rate
- helps fight infection
- improves the skin
- prevents abnormal growths
- reduces stress and anxiety
- improves mood, aids depression

Omega 3 and Omega 6

The two main groups of EFAs are called Omega 3 (linolenic acid) and Omega 6 (linoleic acid). The body takes these in and breaks them down into component elements - EPA and DHA in the case of the former and GLA and DGLA in the case of the latter. This conversion can be affected or blocked by many things including pollutants, food additives, saturated fats, high cholesterol and blood sugar, stress, viruses, radiation, nutrient deficiencies, alcohol and ageing. Add to that the fact that heat, light and oxygen can all destroy or cause these fats to go rancid and you can understand why it is recommended that you supplement EFAs.

The modern diet is much more deficient in the Omega 3 fats than the Omega 6 and it is usually this Omega 3 it is best to begin supplementing. Both fats are necessary to make the hormone-like substances called prostaglandins.

Prostaglandins regulate moment-to-moment cellular activity and are grouped into three categories: Series 1, Series 2 and Series 3. Each group has a different set of effects. Series 1 helps to keep blood thin and prevents clots, relaxes blood vessels thus helping prevent blockages, lowers blood pressure, helps insulin activity, helps maintain the water balance in the body, improves nerve and immune function, helps arthritis and regulates calcium metabolism.

Series 2 prostaglandins have both an anti-inflammatory and a pro-inflammatory effect and opposes many of the Series 1 effects and can lead to high blood pressure, blood clotting, inflammatory conditions and water retention. Series 3 prostaglandins which are made from Omega 3 fatty acids help to control the 'bad' effects of the Series 2 prostaglandins and a deficiency of Omega 3 can therefore lead to excessive Series 2 production and the problems this brings.

Where Can I Find EFAs?

Omega 3 essential fatty acids are found in mackerel, herring, lake trout, salmon, tuna, sardines, swordfish and white fish. Also in pumpkin, hemp and linseeds and their associated oils, canola oil and walnut oil. Omega 6 essential fatty acids are found hemp, pumpkin, sunflower, safflower, sesame and maize seeds and their associate oils and walnuts, soya beans and wheat germ.

Oils should be cold pressed as heat destroys the EFAs, and bought refrigerated. They can be taken direct (1 – 2 dessertspoons a day) or added to salads and other foods without heating. Alternately, eat the seeds and nut as snacks or grind them in a coffee grinder and sprinkle on your cereal, porridge or add to soups and stews.

Should I Supplement?

If your diet is not rich in any of these things your best bet is to supplement. The essential fatty acids are too important to health and well-being to risk being short of, and EFA deficiency is a common cause of health problems.

There are many supplements on the market, but you need to ensure that a dose will give you at least 200 mg of EPA and 200 mg of DHA for the Omega 3s, and a minimum of 100 mg of GLA for the Omega 6s. Sadly, many supplements fall far short of this. There are supplements which combine all three, often in a balance of 2:1 in favour of Omega 3s as they are more deficient in the diet. It is often recommended however that you begin by supplementing the Omega 3s for a period to make up the deep deficiency many people have of these, before putting the Omega 6s in alongside to balance.