

# Essential fatty acids

## (Salmon Oil, Omega 3)

Researchers have long been interested in knowing whether there is a relationship between diet and the occurrence of cardiovascular disease (CVD), and if so, what kind? Bang Dyerberg noticed that Eskimos in western Greenland hardly ever suffered from CVD. He also noted that they had a diet very rich in fish. Eskimos eat very few carbohydrates and a relatively large amount of protein and fat. Those in technologically-developed countries in Europe and America also consume a diet plentiful in protein and fat and yet, cardiovascular diseases endanger their health.

Why? The main difference is that Eskimos' diets contain a high amount of protein and fat of marine origin. This contains many long chain, unsaturated, so-called omega 3 fatty acids. In Greenland, the diet of the population contains three times more unsaturated fatty acids than in Denmark. It is interesting to note that while 13.1% of the total fatty acid content of Eskimo foods is omega 3 fatty acid, this rate is only 0.84% in Denmark. The occurrence of cardiac infarction is about 400 times less among the Eskimos with their diets rich in fish and seal, than in 'more civilized' societies. Eskimos consume 10 times more omega 3 fatty acids than Europeans and Americans.

An especially interesting relationship has been explored in the case of diabetic patients. It is well-known that diabetic patients have a five times greater risk of cardiovascular diseases, so that the occurrence of diabetes and cardiac diseases are closely related. In the case of Eskimos, with their traditional diets, tests revealed low levels of blood fats and normal glucose tolerance. (Glucose tolerance = toleration of sugar. In the event of adequate insulin regulation, regular blood glucose levels are rapidly restored after meals or sugar loading without large excesses.) However, if they switch to western foods with a high amount of carbohydrates, their blood fat and triglyceride levels also increase and their glucose tolerance also deviates from the regular.

Essential fatty acids are important for our bodies, as they are the basic materials of the prostaglandin hormone family. Prostaglandins are important regulators of the vascular system, the immune system, and fat metabolism. They reduce cholesterol and triglyceride levels, impede the aggregation of platelets to form blood clots, and thereby reduce the risk of arteriosclerosis and cardiac infarction. They improve the blood flow by reducing its viscosity, offering significant improvement in tissue oxygen supply. Prostaglandins also reduce hypertension by impeding the development of various vascular diseases, primarily arteriosclerosis.

According to tests performed on animals by American researcher Dr. David P. Rose, the consumption of omega 3 fatty acids impedes the development of breast cancer and the formation of colon cancer. According to results of an investigation published in the New England Journal of Medicine, smokers who consume considerable amounts of fish are less likely to suffer from emphysema and bronchitis. Dr. Eyal Shahn, leading the investigation, found that for those eating fish, the risk of bronchitis is reduced by one-third, and that of emphysema by two-thirds.

Many people around the globe suffer from psoriasis. The consumption of fish oil may offer a solution. Japanese researchers applied a daily dose 3.6 g. of 90% eicosa-pentaenic acid to patients suffering from chronic psoriasis (this unsaturated fatty acid is present in fish oil together with docosahexaenic acid). The investigation was started with nine patients. Six completed the year-long treatment. For five out of the six patients, improvements of varying degrees were observed. The status of one patient did not change. None of them suffered from the experiment. Improvements were observed 2-3 months after starting the treatment and continued throughout the administration of eicozapentaenic acid.

In addition to improving circulation, essential fatty acids - and prostaglandins and prostacyclins formed from them - also advantageously influence the body in another way. They reduce inflammation (acute rheumatism).

According to tests, pains in joints decrease significantly after a few months of use.

These substances mobilize the immune system. That is why those who regularly consume them have a far greater resistance against disease. Since a considerable amount of unsaturated fatty acids is necessary for an effective nervous system, their administration may also bring improvement in the event of nervous disorders (multiple sclerosis).

Finally, unsaturated fatty acids protect and improve the skin.

### ATTENTION!

Unsaturated fatty acids are very sensitive to the harmful effects of free radicals and actually become harmful. Supplementation with antioxidants is therefore recommended in the event of extra unsaturated fatty acid intake.