



## The Health Effects of Natural Stable Fish Oil

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*Many people think that fat in the diet is bad. In fact, fat is necessary for life but most of us consume the wrong types of fat. Over the past century, our intake of different fats has changed markedly, with most of us eating far more saturated fats and omega-6 fats from vegetable oils than ever before, whilst our intake of omega-3 fats from oily fish has decreased by an astounding 80%. In times gone by, oily fish was a normal and regular part of the daily diet, but things have changed, with only one third of people in Britain regularly eating the government's minimum recommendation of 1-2 portions of oily fish per week.<sup>1</sup> As a result, there is widespread deficiency of omega-3 fats, and this has important consequences for health.*

### The Eskimos

Many years ago, two Danish physicians working in Greenland noticed that the Eskimos seemed practically immune to heart disease – in fact, they didn't have a phrase for "heart attack" in their vocabulary. Considering the Eskimos' high fat diet, this struck the doctors as intriguing enough to investigate further and they discovered that the Eskimos' diet was rich in particularly beneficial fatty acids.

In times gone by, people consumed much more fish than we do today. Mackerel, trout, herring, sardines, tuna and salmon are all high in two kinds of valuable omega-3 fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Since we now eat less fish than people did in the past, some doctors believe that most of us have a deficiency of omega-3 fatty acids in our cells. This may explain the high incidence of several common modern ailments, including cardiovascular disease, stiff joints, poor blood circulation and unhealthy skin.

Interestingly, the fatty acid component of cells differs considerably between different populations. People in Europe and the USA have low levels of omega-3 fatty acids in their cells and coronary heart disease is common. Conversely, the Japanese and Greenland Eskimos have a much lower incidence of heart disease and their consumption of omega-3 fatty acids is very high.

### Health Benefits

Fat is bursting with calories and consuming too much will eventually lead to obesity, particularly if you don't take regular exercise. However, different fats appear to have different properties, and too much of our fat intake comes from dairy products and meat rather than from fish. It is thought that stable fish fatty acids can actually increase the speed of certain chemical reactions in the body, burning fat to form carbon dioxide, water and energy, which can bring about a decrease in body weight, particularly when they replace saturated fats in a diet.

Omega-3 fatty acids help to keep the cell walls of deep-water ocean fish supple. These fish oils have been shown to keep cells flexible in humans too, helping to maintain joint suppleness and

skin and blood vessel elasticity. They also have favourable effects on many bodily functions by forming substances that aid the immune system and counteract the effects of thromboxane, which induces blood clotting and vasoconstriction.

Adding stable fish oil to the diet of people suffering high blood pressure has enabled some doctors to lower the doses of drugs prescribed for hypertension, thus apparently reducing the risk of side-effects from the drugs. Ingesting natural fish oil has also been shown to act as a gradual anti-inflammatory and decrease pain in joints, although it can take several months before there is any noticeable difference. Fish oil is also believed to improve the circulation of blood to fingers and legs.

"Natural stable fish oil has been found to have very promising effects on health. Most interesting may be the effect on irregular heartbeats and the rate of sudden cardiac death," says Professor Tom Saldeen, MD, PhD and author of 'Fish Oil & Health'.<sup>2</sup> "About half of all sudden cardiac deaths among younger and middle-aged people occur without any early symptoms. It is therefore especially important to know that a simple change in fat intake can help prevent these deaths."

### Natural Stable Fish Oil

A number of experimental and clinical studies on the beneficial effects of omega-3 fatty acids have been carried out by Professor Saldeen and his associates at the University of Uppsala, Sweden. Concluding evidence suggests that some ordinary fish oil preparations may, due to their instability, produce free radicals, which can be damaging to cardiovascular health.

From Professor Saldeen's research, a stable fish oil has been developed in which omega-3 fatty acids have been combined with appropriate antioxidants to produce a more stable preparation that has more pronounced effects in humans. As such, the stable fish oil has significant advantages over ordinary, commercially available fish oil preparations. An unpalatable taste or fishy odour distinguishes unstable fish oils from stable varieties, which have a neutral taste and are odourless.

In natural stable fish oil there is a maximal natural concentration of omega-3 fatty acids, stabilized by naturally present antioxidants which have been restored. Unfortunately, many people confuse fish oil, which is obtained from the body tissues of oily fish, with cod liver oil, which is obtained from the liver of cod. Cod liver oil has a different taste and is primarily used for supplementation of vitamins A and D. There are also many fish oils on the market today which are not stable and therefore do not perform the functions associated with the stable fish oil research by Professor Saldeen.

### Studies

Professor Saldeen's extensive research on the effects of natural stable fish oil has produced a wealth of clinical evidence, demonstrating the wide-reaching benefits that supplementation can bring to human health.

### Cholesterol

In studies, subjects taking natural stable fish oil had reduced levels of LDL cholesterol (the 'bad cholesterol' which is known to be a major risk factor for coronary heart disease), whilst levels of HDL cholesterol (the 'good cholesterol') were increased.

### Triglycerides and Fibrinogen

People suffering from myocardial infarction often have high blood levels of triglycerides, a major risk factor. Stable fish oil decreased the triglycerides markedly and to a far greater extent than ordinary fish oil. In fact no other compound to date seems to be more effective in decreasing triglycerides.

Fibrinogen, a blood protein, is an important risk factor for cardiovascular disease as it is one of the ingredients that makes up thrombi (clots). Studies have shown that stable fish oil helps to decrease the fibrinogen level in the blood, therefore reducing the risk of blood clots.

### Lipoprotein (a) and Cardiovascular Risk

Lipoprotein (a) is one of the most important risk factors for heart disease. It has similar properties to LDL-cholesterol. Lipoprotein (a) is responsible for thrombus formation and when levels are elevated the risk of myocardial infarction is markedly increased. When stable fish oil was taken, lipoprotein (a) decreased.

### Stable Fish Oil Does Not Increase Blood Sugar

Unlike many fish oils which are known to increase blood sugar, stable fish oil can be given to diabetics which is a major advantage as many diabetics do have an increased tendency to thrombus formation. Patients with metabolic syndrome (characterised by abdominal obesity, high blood pressure, insulin resistance, increased blood sugar, increased triglycerides, low HDL-cholesterol and raised LDL-cholesterol) would also benefit greatly from taking stable fish oil.

### Blood Circulation and Hypertension

Subjects taking natural, stable fish oil have reported improved blood circulation in the legs and fingers, which could be due to improved relaxation in the blood vessel walls. Stable fish oil is also of particular interest in patients with mild hypertension especially when on medication. The stable fish oil has been shown to help further reduce blood pressure and also alleviate

some of the side effects associated with some of the drugs, e.g., raised blood lipids. Stable fish oil was found also to increase vascular elasticity in elderly people and lower hypertension.

### Atherosclerosis and Cardiac Arrhythmias

Several studies have documented the beneficial effects of omega-3 fatty acids in helping to prevent the development of atherosclerosis and its major manifestation, Coronary Heart Disease. Studies have also demonstrated that their use in patients with documented myocardial infarction reduces recurrent cardiac events. It has been shown that stable fish oil prevents the development of atherosclerosis by changing the structure of LDL, and also decreases the development of blood clots and inflammation.

Stable fish oil decreases cardiac arrhythmias and it seems to be due to its direct action on the heart. It has been found that intake of fatty fish or natural stable fish oil reduces the total mortality and the mortality from heart disease by 29% after two years in men with previous myocardial infarction. It has also been demonstrated that victims of sudden cardiac death have lower levels of omega-3 fatty acids and higher levels of saturated fatty acids in their arteries.

### Joint Stiffness

As well as the benefits of stable fish oil on the cardiovascular system it has also shown some excellent results in treating joint disease by decreasing pain and tenderness. It may take several months for the effects to appear and some people may need a larger dose than normal to obtain the best effect.

### Brain Function

Studies have shown that omega-3 oils are abundant in the brain as well as in fatty fish and some experimental studies have found that intake of stable fish oil may enhance mental capacity as well as helping with such conditions as attention-deficit disorder in children, and post-partum depression.

Healthy persons as well as persons with risk factors for cardiovascular disease should seriously consider supplementing their diet with stable fish oil. And, just like a multivitamin/mineral, the longer the product is taken, the greater the benefits.

### Epilepsy in children

Physicians in Sweden have for many years used stable fish oil in the treatment of children with severe epilepsy. EPA and DHA have long been known to have anti-seizure effects. For example, a 6-year study involving 25 children aged between 1-18 years found a marked decrease in seizures when following a ketogenic diet and supplementing with 4-8 grams of stable fish oil daily (3).

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### References

1. *The Human Mind: And How to Make the Most of It*, Robert Winston (Bantam Press) 2003
2. *Fish Oil and Health*, Tom Saldeen (SwedeHealth Press) 1997
3. Dahlin M, Hjelte L, Nilsson S, Amark P. *Plasma phospholipid fatty acids are influenced by a ketogenic diet enriched with n-3 fatty acids in children with epilepsy*. *Epilepsy Research*, 73:199-207, 2007