

IMAGE AWARENESS HEALTHLETTER

SALMON OIL

Good News For Your Heart



Special Updated Report

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NOTICE

This newsletter is designed for educational purposes only. Any individual suffering from health problems which are mentioned or discussed should consult a physician for proper diagnosis and treatment.

Overview

Nutrition is a relatively young science. It consists of the study of the components of the foods we eat and the effects that these things have upon our health and well-being. There are many constituents of foods which remain to be studied. Thus nutrition is not a "closed" science.

One of the constituents of foods currently under study is the oils in fish. These are termed "omega-3 fatty acids." Since 1978 researchers have seriously undertaken to clarify the health effects of these fish oils. With each passing day, exciting new discoveries are made.

While much research remains to be done, fish oils appear to confer the following benefits under some circumstances:

1. Blood Fats

Some fish oils have the ability to lower cholesterol and triglyceride levels in the blood. These oils seem particularly powerful in their ability to reduce triglyceride levels.

2. Circulation

Fish oils have the ability to decrease the stickiness of blood platelets. These are the components of the blood that clump together to stop bleeding when a person is cut.

Excessive stickiness of blood platelets can lead to cold hands and feet. It also will increase the risk of stroke and heart attack. The risk of these problems can apparently be decreased by supplementation of the diet with fish oils.

3. Blood Pressure

Fish oils appear to be able to lower blood pressure, possibly by thinning the blood and allowing it to flow more freely. High blood pressure is a risk factor in heart disease.

4. The Immune System

Fish oils appear to be able to aid the body when a person's own immune system turns on him. Research indicates possible value for arthritic disease and migraine headaches. It is also possible that fish oils may have a protective effect against cancer.

5. Mental Illness

Fish oils may be of value in improving many of the symptoms of mental illness. Some of these oils may control the functioning of the nervous system.

6. Reducing Vitamin Needs

Total requirements for nutrients may be decreased by supplementation with the omega-3 fish oils. In at least one experiment the effectiveness of

vitamin B-3 in producing a niacin flush among the mentally ill increased tenfold with omega-3 oils.

7. A Futile Search

Dr. Maynard Murray tells of dissection of literally thousands of sperm whales and seals. A futile search was made for malignancies, arteriosclerosis, and arthritis. He wrote, "No malignant tumors were found, and there was no pathology in their arteries and joints." The thymus, crucial to immune function, was in remarkably good shape as well. Whales have 8 inches of fat under the skin and consume large amounts of omega-3 oils.

Reference:

Howell, Edward, *Enzyme Nutrition*, New Jersey: Avery Publishing, 1985, p. 163.

Are They Essential?

Researchers are beginning to think that the omega-3 oils may be essential for health. In 1850 40% of the fat in the American diet consisted of

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omega-3 oils. Today only 5% of the diet consists of these oils.

Scientists are not yet sure of all of the constituents of fish oils that are responsible for the beneficial effects which have been observed. Two of the active ingredients appear to be eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The wide ranging action of these oils upon body chemistry can be explained by their influence upon temporary tissue hormones called prostaglandins which control crucial aspects of body chemistry.

If these oils are as important as research indicates they may well be, the low dietary intake of the average American could well mean that the lack of these oils is a major nutritional deficiency in our society.

It could be a contributing factor to the high incidence of mental illness, heart disease, and the crippling inflammatory diseases that create such a tremendous amount of suffering in our society. Neglect could spell the collapse of civilization as we know it.

Salmon Oil: A Quality Source of Omega-3 Oils

Almost every day new benefits of the omega-3 oils are proclaimed by the media as they are uncovered by medical science. Many businesses are selling any product they can get to grab a part of the market.

Is quality important? We feel that it is and this feeling is supported by a recent article published by the Center for Science in the Public Interest.

The article states, "Contaminants, like PCB's, accumulate in fish fat, so make sure your fatty fish comes from unpolluted waters. Salmon is usually a safe bet."

The product we recommend is "concentrated Salmon Oil solely from health-screened, disease-free salmon selected exclusively for human consumption."

REFERENCE: Liebman, Bonnie, "Good Fats", *Nutrition Action Health Letter*, Center for Science in the Public Interest, July/August 1986, p.6.

Getting What You Pay For

There has apparently been considerable dishonesty in the marketing of the omega-3 oils. The crucial ingredient people take these supplements for is known as EPA. Dr. Ernst Schaefer of Tufts University tested ten major brands of Omega-3 supplements and found that they only averaged 38% of label claims. Schaefer felt that improper product development and lack of quality assurance contributed to the discrepancies.

Reference: "Omega-3's: Apparently you don't always get what you pay for," *The Counselor*, Neo-Life Company, March-April, 1988, p. 23.

Heart Disease

Stubborn high cholesterol and triglyceride levels have been reduced within 7-10 days by adding salmon oil to the diet. All patients showed an improvement despite the fact that they were on a low fat diet to begin with.¹

Elevated triglycerides are a serious problem contributing to premature aging by depriving vital tissues of nutrients and oxygen. Mannerberg writes, "All these studies show that high blood triglycerides alter the rate of blood flow and decrease the amount of oxygen available to the cells. Since oxygen is not stored in the body, even a slight oxygen deficiency can upset the normal physiology."²

Triglycerides cause red blood cells to stick together and form a sludge which inhibits the free flow of blood in the body. As a result, "Sludging can obstruct the blood flow to the liver, kidney, heart, and brain, causing it to take three times longer to circulate than normal. Because brain tissue is extremely sensitive to the need for oxygen, it is easy to understand a possible role obstructed circulation can play in mental disease and aging. An increased loss in brain cells over a lifetime by continuous sludging of the circulation may lead to the most severe problem of later life—the loss of mental functioning so often referred to as senility."³

In view of the seriousness of high triglyceride levels, those with the problem should investigate the

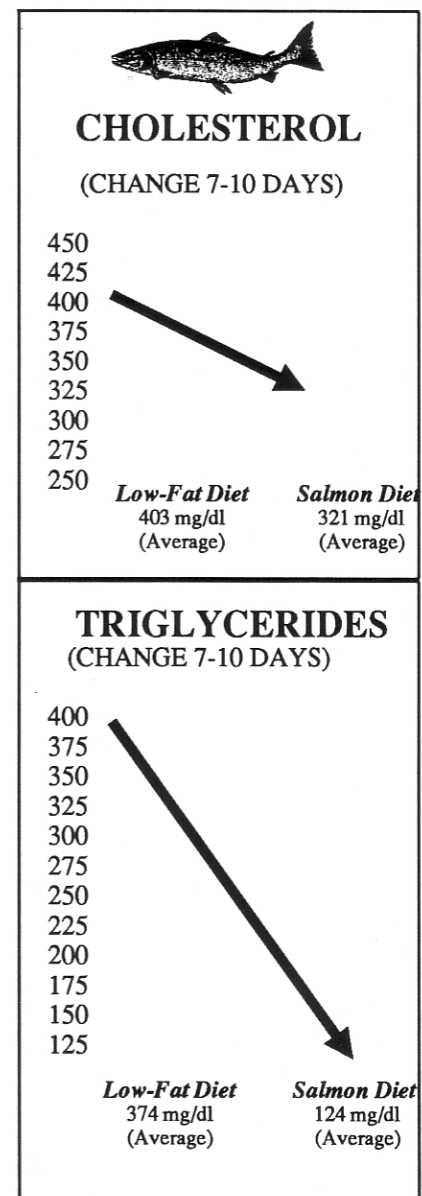
promising avenue of research with fish oils.

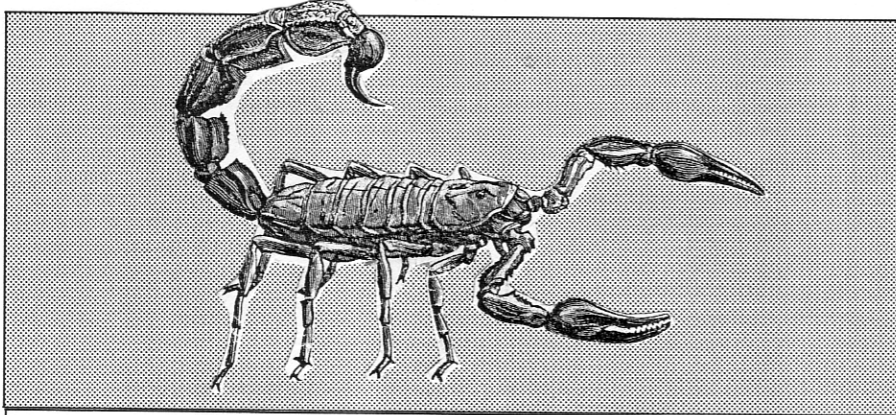
REFERENCES:

1. Harris, William and Connor, William, "The Effects of Salmon Oil Upon Plasma Lipids, Lipoproteins, and Triglyceride Clearance", *Transactions of the Association of American Physicians*, xciii, 1980, p. 148.
2. Mannerberg, Don and Roth, June, *Aerobic Nutrition*, New York: Berkley Books, 1983, p. 20.
3. *Ibid.*, p. 21.

High Blood Pressure

It has long been known that those with high blood pressure tend to be low in calcium. One possible explanation for this is the fact that sugar antagonizes calcium. Sugar has also been observed to elevate blood pressure.





A scorpion pictures the burning pain that can characterize inflammatory disease.

Recent research has demonstrated that supplementation with calcium alone is not always the most effective means of meeting the nutritional needs of those with high blood pressure. A diet high in fish oils and calcium together is more effective at lowering blood pressure than either of these nutrients alone.

Reference:

Metz, J. et al., "Effects of Dietary Fish Oil and Calcium on Blood Pressure in experimental hypertension," *Clinical Research*, 1987; 35:A165.

Inflammatory Disease

It appears to be possible to decrease the inflammatory response in the body by inclusion of fish oils in the diet.

This would have implications for inflammatory diseases such as arthritis, psoriasis, asthma, and migraine headaches.

One of the substances responsible for inflammation in the body is called a leukotriene.

These compounds are temporary tissue hormones that are a thousand times more inflammatory than histamine. A dramatic drop in these substances has been noted as a result of supplementation with fish oils.

In one study seven normal people were fed 3.2 grams of EPA, a component of fish oil, daily for six weeks. The EPA content of white blood cells increased sevenfold. The release of the inflammatory leukotrienes in the body decreased by 37%.

REFERENCE: Lee, Tak, et al., "Effect of Dietary Enrichment with Eicosapentaenoic and Docosahexaenoic Acids on in Vitro Neutrophil and Monocyte Leukotriene Generation and

Neutrophil Function", *New England Journal of Medicine*, 1985, vol. 312: 1217-24.

Rheumatoid Arthritis

Recent research on arthritis strongly suggests that high quality fish oils may greatly alleviate the pain and tender joints of those suffering from rheumatoid arthritis. This benefit is probably due to the anti-inflammatory activity of these oils as described above.

An article in the *Lancet* summarizes, "Results favored the experimental group (using fish oils) at 12 weeks for morning stiffness and number of tender joints. On follow-up evaluation 1-2 months after stopping the diet, the experimental group had deteriorated significantly in patient and physician global evaluation of disease activity, pain assessment, and number of tender joints."

Reference: Kremer, Joel, et al., "Effects of Manipulation of Dietary Fatty Acids on Clini-

cal Manifestations of Rheumatoid Arthritis," *The Lancet*, January 26, 1985, p. 184.

Migraine Headache

Some people suffer tremendously from migraine headaches. Sometimes medication is ineffective for these people. At the University of Cincinnati College of Medicine, migraine sufferers unresponsive to medication were provided a diet high in omega-3 fish oils. Headaches severity diminished considerably over controls.

Reference:

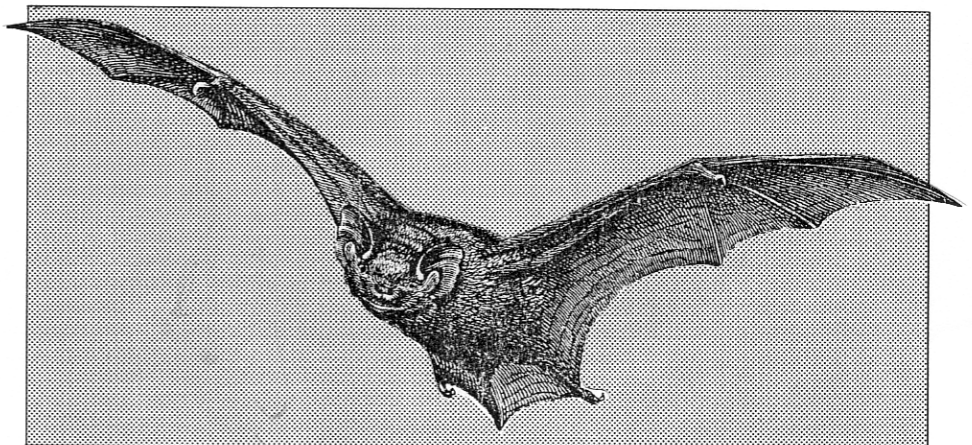
Glueck, C. et al., "Ameliorization of severe migraine with omega-3 fatty acids: A double-blind, placebo-controlled clinical trial," *American Journal of Clinical Nutrition* 1986; 43:710.

Tumor Growth

It is too early to be completely clear upon the role of fish oils in cancer, however early research indicates that these substances may be valuable as protective agents against cancer.

In one study with rats, a heavy intake of fish oils resulted in "a significant decrease in the development of both the size and number of preneoplastic lesions." The article concludes, "This study provides evidence that fish oils, rich in w-3 fatty acids, may have potential as inhibitory agents in cancer development."

Dr. Rashida Karmali of Rutgers University and Memorial Sloan-Kettering Cancer Center has also reported reduced size, weight, and number of breast and prostate tumors



The association of bats with mental illness may be partially due to the fact that they are often carriers of rabies which has drastic effects upon behavior.

in mice given fish oil.² Further research in this area should be of great interest.

References:

1. O'Connor, Thomas et al., "Effect of Dietary Intake of Fish Oil and Fish Protein on the Development of L-Azaserine-Induced Preneoplastic Lesions in the Rat Pancreas, *Journal of the National Cancer Institute*, November 1985, p. 959.

2. Karmali, Rashida, *Preventive Medicine*, July 1987.

Mental Illness

Can lack of omega-3 oils make a person neurotic or psychotic? This is the suggestion made by Donald Rudin in *Biological Psychiatry*. He believes that the omega-3 oils are responsible for regulating the "neurocircuits en block."

Rudin's article grew out of actual experience in working with patients suffering from mental illness. When he provided these patients with a supplement of the omega-3 oils a number of symptoms improved including ringing of the ears, dandruff, dry skin, fatigue, food allergies, cold sensitivity, alcohol intolerance, easy bruising and irregular sleep.

Supplementation with Omega-3 oils also appeared to be able to reduce the nutrient requirements of those suffering from mental illness. The amount of vitamin B3 (niacin) required to create a niacin flush dropped in one patient from 1000 mg to 100 mg. This is a tenfold decrease in the amount of the nutrient required to achieve the flushing response.

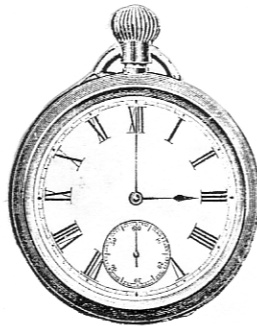
The Time Factor

Speed of response to supplementation can be affected by the quantities of supplements consumed and which nutrients are taken together. Rudin's patients were already supplementing their diets when he began giving them omega-3 oils because they felt better with them. Results might not have been as dramatic if the omega-3 oil supplements had been taken by themselves.

Rudin's work indicates that results of supplementation are not immediate. Within 1-2 weeks tinnitus, dandruff, dry skin and fatigue began to improve. Marked improvement was noted within 6-8 weeks in such problems as cold sensitivity, food allergies, alcohol intolerance, easy bruising, and irregular sleep patterns.

Ratios

Rudin found that ratio's of omega-3 to omega-6 oils in the diet were cru-



cial. He conducted one study on normal people who were suffering from many of the symptoms of lack of omega-3 oils. The symptoms improved with supplementation with omega-3 oils, but recurred when safflower or corn oils were used to replace the omega-3 oils. Corn and safflower oils are sources of omega-6 fatty acids.

REFERENCE: Rudin, Donald, "The Major Psychoses and Neuroses as Omega-3 Essential Fatty Acid Deficiency Syndrome: Substrate Pellagra", *Biological Psychiatry*, Vol. 16, No. 9, 1981, p. 837.

Possible Deficiency Manifestations

- Tiredness and fatigue
- Cold sensitivity
- Skin Problems:
- Dandruff
- Dry or scaling skin
- Reddening of skin
- Variable pigmentation of skin
- Fissuring of the hands or feet
- Hardening of hair follicle
- Ringing of the Ears
- Menstrual Irregularity
- Food sensitivity
- Alcohol intolerance
- Easy bruising
- Irregular sleep
- Excessive nutrient requirements
- Irritable bowel syndrome
- Distressing fear (Agoraphobia)
- Schizophrenia
- Manic-Depressive Psychosis

Symptoms noted improved by:

Donald Rudin, Department of Molecular Biology, Eastern Pennsylvania Psychiatric Institute, Philadelphia, Pennsylvania

About Healthletter

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