

Omega-3 fatty acids are constantly in the news with new studies showing a host of potential new benefits and reconfirming others. Here is a brief summary of the potential benefits of omega-3 fatty acids and what the experts suggest are optimal consumption levels. Note that in some cases, such as the Harvard studies noted below which indicate reduced risk of heart disease, the actual amount of omega-3 fatty acids consumed was not measured directly, but was estimated from overall fish consumption. In other studies, actual consumption of omega-3 fatty acids was measured.

The Food and Drug Administration does not yet permit formal health claims to be made for omega-3 fatty acids in relation to any of these conditions. But as more studies on the effects of omega-3 fatty acids in these health-related areas are completed, the evidence continues to show their benefits.

Selected references to the studies are given in each area.

## Benefits

### Reduced Risk of Stroke and Heart Attack

Two long-term Harvard studies (one among 84,688 women and another among 22,000 men) show that several helpings of fatty fish a week—a prime source of omega-3 fatty acids—appear to protect men and women from heart disease.

An increasing amount of additional evidence from other studies indicates that omega-3 fatty acids in the diet help prevent heart disease in people with no history of heart disease and, at increased consumption levels, may dramatically cut the mortality rate in heart attack survivors.

The numbers are striking. The estimated reduction in the incidence of coronary heart disease (CHD), the leading cause of death in the U.S., is 30 percent, which means 210,000 fewer cases of CHD a year. The health care cost savings are enormous. The reduction in the toll of human suffering is incalculable.

Study references: JAMA, April 10, 2002, 287(14): 1815-21.

New England Journal of Medicine, 2002, 346: 1113-1118

### Alzheimer's Disease

A recent study at the Rush Institute for Healthy Aging shows consumption of fish once a week among people aged 65-94 reduced the incidence of Alzheimer's disease by 60 percent, compared to those who rarely or never ate fish. This study supports the findings of two previous European studies.

Study reference: Archives of Neurology, 2003, 60(7): 940-946

### An Important Nutrition Component for Unborn and Breast-fed Babies

DHA, one of the types of omega-3 fatty acids in salmon, is critical to normal eye and vision development in infants. Other studies show signs of improved brain development in babies whose mothers ate higher levels of DHA, an omega-3 fatty acid, during pregnancy.

Study references: American Journal of Clinical Nutrition, April 2002, 76:608-613.

Pediatric Research, 1998, 44(2):201-209.

## Depression

Several studies indicate the possibility of beneficial effects of omega-3 fatty acids on various forms of depression.

A large-scale study published in 1998 in *The Lancet* by Dr. Joseph Hibbeln, chief of the outpatient clinic at The National Institute on Alcohol Abuse and Alcoholism, showed a connection between people in countries that consume large amounts of fish and low rates of depression.

A more recent and more specific study by Dr. Andrew Stall at McLean Hospital in Belmont, MA, focused specifically on patients with bipolar disorder. Half of the subjects were given fish oil tablets, the other half a placebo. After four months, half of the placebo patients had relapsed into depression while only two of the 15 fish oil patients had relapsed.

Study reference: *Lancet*, 1998, 351(9110):1213.

## How Much Omega-3 Provides Benefits?

The basic recommendation by the American Heart Association for prevention of CHD is currently two servings of fatty fish a week. For people who have had a heart attack, the recommendation is 1 gram of omega-3 fatty acid per day.

Since the omega-3 content varies widely in fish, it is important to note that farmed Atlantic salmon, at 1.9 grams per serving, and to a varying degree most species of wild salmon, provide higher levels of omega-3 fatty acids than most other fish sources. Fresh yellowfin tuna, for example, provides 0.2 gram per serving. Swordfish 0.6 gram per serving. Flounder 0.2 gram per serving. Mackerel, at 2.5 grams per serving, is another high-level source of omega-3 fatty acids.

## The Benefit of Farmed Atlantic Salmon: Getting Enough Omega-3 Fatty Acids

In all cases, there is a certain level of omega-3 fatty acids at which the benefit becomes evident. This varies by the condition and generally is more pronounced at higher levels. Since omega-3 fatty acids are found in a limited number of foods and since many of these are not currently a regular part of the average diet, identifying foods that provide substantial amounts without significant diet alterations is a prime consideration.

Because a single serving of farmed Atlantic salmon contains almost 2 grams of omega-3 fatty acids, it is an important part of supplying this vital nutrient without the need for major changes in the diet. For example, while tuna or swordfish also provide omega-3 fatty acids but at lower amounts (0.2 and 0.6 gram, respectively), in most cases it is much easier for consumers to eat a single salmon meal a week and get 1.9 grams of omega-3 fatty acids than three or more meals of other fish for the same amount.