



HEART HEALTH BENEFITS FROM EATING FISH

We now know that eating fish regularly protects against heart disease and dying suddenly from a heart attack. This is because the oils in fish are unique—they have long-chain omega-3s, fatty acids found in few other foods. Fish omega-3s improve the way the heart works and make other conditions that contribute to heart disease less dangerous. For these reasons, the American Heart and Diabetes Associations and the U.S. Government's Dietary Guidelines for Americans urge everyone to eat fish—especially fatty species such as salmon, herring, black cod, mackerel, and sardines—at least twice a week. For people who already have heart disease or diabetes, the oils in fish are especially important, as they may prolong life and improve the condition. Long-chain omega-3s from fish help to:

♥ **Maintain normal heart rhythms**—When the controlled rhythm of the heart gets out of order, a dangerous pattern of very rapid heartbeats can develop, which can be fatal. Omega-3s from fish help prevent these disturbed heart rhythms from developing.

♥ **Reduce the chance of sudden death**—Nearly half of all cardiac deaths occur suddenly, before a person can seek help. Most sudden heart deaths come from uncontrolled heart rhythms. Omega-3s from fish help prevent this type of fatality. Besides improving heart rhythms, seafood omega-3s improve other electrical properties of the heart.

♥ **Reduce the chance of stroke**—Blood clots that develop in the brain or are carried to the brain from elsewhere cause strokes and serious disability. They can be fatal. People who eat fish regularly are less likely to develop strokes.

♥ **Lower chance of having a first heart attack**—People at high risk of having a heart attack may be less likely to develop one if they consume the omega-3s from fish on a regular basis. Omega-3s help the heart by slowing the development of atherosclerosis (clogged blood vessels) and improving heart and blood vessel function.

♥ **Reduce inflammation**—As heart disease develops, blood vessels become mildly inflamed and this worsens heart disease. This inflammation is greatly reduced in people who regularly consume fatty fish or the omega-3s from fish. Seafood omega-3s help counteract the inflammatory effects of the fatty acids we eat in vegetable oils and are used to make substances that help end inflammation.

♥ **Improve the pattern of lipids in the blood**—Different types of lipids (fat-like substances) are carried in the blood. Seafood omega-3s can dramatically lower the amount of blood fats (triglycerides) and this reduces the chance of a heart attack. People with type 2 diabetes and certain types of heart disease have very high levels of blood triglycerides and eating fatty fish or the omega-3s found in fish is one of the best ways to lower these fats.

♥ **Improve “good” cholesterol or HDL levels**—People who have higher levels of HDL or “good” cholesterol in their blood are less likely to develop heart failure. HDL helps remove cholesterol from the blood vessels where it can be harmful. Regularly eating fish or the omega-3s from them helps boost HDL or “good” cholesterol.

♥ **Lower blood pressure**—High blood pressure or hypertension increases the chance of heart disease and stroke and is controlled by medications. High blood pressure is sneaky because it can develop without a person knowing it. People who eat fish regularly have slightly but consistently lower blood pressure than those who do not. Achieving a healthy body weight and exercising at least 3 times a week is especially important for lowering blood pressure.

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♥ **Lower chance of blood clots**—Blood clotting helps heal injuries, but if blood clots too readily, it can block a blood vessel, especially one that is clogged with plaque. When this happens it can result in stroke, heart attack or death. The omega-3s from fish reduce the tendency to form blood clots and improve blood flow. Omega-3s also make red blood cells more flexible so that circulation through small blood vessels is improved.

♥ **Better blood vessel function**—Our arteries do more than send blood around the body. Their cells are miniature chemical factories making substances that affect blood flow, artery wall flexibility and inflammation. With the omega-3s from fish, arteries are more elastic, less likely to promote blood clots and more resistant to inflammation. As a result, blood flow, blood pressure and inflammatory responses are improved.

♥ **Improved heart rate adaptability**—A person's pattern of heartbeats normally has small beat-to-beat changes. These small changes reflect the heart's ability to adapt to changes in its environment. When fish oil omega-3s are present, the heart rate shows greater flexibility compared to its variability without omega-3s. Having greater variability in heart rate is linked to lower heart disease and less likelihood of dying from it.

♥ **More stable arterial plaques**—One of the riskiest aspects of heart disease is the build-up of deposits or plaques in the blood vessels going to the heart and brain. These plaques begin in childhood and are the early stages of atherosclerosis. As the plaques grow larger they are more likely to break, starting a chain of events that can lead to heart failure. There is growing evidence that the omega-3s from fish help make these plaques more stable and less likely to rupture. In some studies, the amount of plaque decreases with fish oil consumption, easing blood flow and reducing the chance of stroke or heart attack.

[Written by Joyce A. Nettleton, DSc, ScienceVoice Consulting, Denver, CO.]

www.alaskaseafood.org
Administrative Office (800) 478-2903
311 N. Franklin, Suite 200, Juneau AK 99801-1147
Marketing Office (800) 806-2497
150 Nickerson Street, Suite 310, Seattle WA 98109