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-3 fatty acids found in few other foods. Fish omega-3s improve the heart’s work, and make other conditions that contribute to heart disease less dangerous. For these reasons, the American Heart and Diabetes Associations and the Dietary Guidelines for Americans urge everyone to eat seafood—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:

- Decrease the chance of dying from heart disease—Much evidence has shown that eating fish regularly lowers the likelihood of heart disease mortality by as much as 30%. This effect is mainly due to the omega-3 fatty acids in seafood.
- Reduce the chance of sudden death—Nearly one out of five people with heart disease dies suddenly, before a person reaches help. Most sudden heart deaths come from uncontrolled rapid heart rhythms. Omega-3s from fish help prevent this type of fatality.10 Besides improving heart rhythms, seafood omega-3s improve other electrical properties of the heart, such as heart rate.11
- Improve the pattern of lipids in the blood—Seafood omega-3s can dramatically lower the amount of blood fats (triglycerides) in blood, reducing the chance of a heart attack.12 People with type 2 diabetes and certain types of heart disease can have very high levels of blood triglycerides and eating seafood omega-3s is one of the best ways to lower these fats.13 Seafood omega-3s do not lower LDL or “bad” cholesterol levels and may raise them modestly.14
- Improve “good” cholesterol or HDL levels—Interestingly, the effect of omega-3s on HDL cholesterol is not as strong as their effect on triglycerides. In some studies, the amount of plaque decreases with triglyceride lowering but does not increase with HDL raising.15
- 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. Some, but not all, studies suggest that people who eat fish regularly are less likely to develop strokes.16
- Lower the chance of a second heart attack and non-fatal heart events—In people who have already had heart attacks, seafood omega-3s and the long-chain omega-3s of deep-water fish are significantly lower in people who regularly eat fish or seafood omega-3s regularly. The effect of omega-3s on reducing heart attack risk is significantly lower with regular fish or omega-3 fatty acid consumption.17 The development of other heart diseases, such as unstable angina (painful chest pain), the need for a bypass graft surgery or heart surgery is also lower in people who take EPA, a purified seafood omega-3. Eating seafood fish also linked to a lower occurrence of heart failure, a weakened heart.18
- Reduce inflammation—As heart disease develops, blood vessels become mildly inflamed and this worsens heart disease. Many experts consider inflammation to be an underserved area of heart disease prevention. This type of inflammation is reduced in people who regularly consume fatty fish or the omega-3s from fish.19 Omega-3s also reduce the inflammatory substances produced in the heart’s arteries, improving the function of these blood vessels.20 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 blood vessel function—Our arteries do more than just hold our blood. Most cells and the bones’ mineral structures make substances that affect blood flow, artery wall flexibility and inflammation. With the omega-3s from fish, arteries are more elastic and less likely to promote the formation of blood clots.21 The cells lining the arteries produce less inflammatory substances and more products that limit inflammation when seafood omega-3s are present. Blood flow, blood pressure and inflammation are improved.
- Improved heart rate adaptability—A person’s pattern of heartbeats normally has small heart rate changes. These small differences reflect the heart’s ability to adapt to changes in its environment. Without this ability, the heart becomes less work efficient and, thereby, less able to function. With omega-3s, the heart rate is more variable when present, the heart rate often, but not always, shows greater flexibility compared to its variability without omega-3s.18,19 Having better heart rate variability is a positive finding—can lower heart disease and reduce likelihood of dying from it.22
- More stable arterial plaques—One of the greatest risks of heart disease is the buildup of deposits or plaques in the blood vessels going to the heart and brain. These plaques can break and cause strokes and serious disability. As the plaques grow larger they are more likely to break apart starting a chain of events that can lead to heart failure, there is a chance of a stroke if the plaque’s blood flow makes the plaques more stable and less likely to rupture.23 More work is needed, however, to confirm the findings. Among the most convincing evidence is the omega-3s from fish consumption, eating blood flow and reducing the chance of stroke or heart attack.

References