How Fish Oil Prevents Heart Disease

Omega-3 fatty acids are healthy fats that serve multiple roles.

They are particularly concentrated in **brain** and **heart muscle**.[6,7]

Omega-3 fatty acids are essential for balancing **inflammatory** responses.[8]

Getting enough omega-3s helps counter several major contributors to heart and blood vessel disease, including:

1. **Elevated triglycerides**. High levels of these fats in the blood correlate with an *increased* risk of heart disease. Taking omega-3s *reduces* triglyceride levels.[9-11] The **American Heart Association** has issued a science advisory that **EPA** and **DHA** doses of **2,000–4,000 mg** per day are recommended for lowering triglycerides.[12]

2. **High blood pressure**. Increasing intake of omega-3 fatty acids can modestly reduce blood pressure, a major risk factor for heart disease.[13,14]

3. **Insulin resistance**. When cells do not respond to the hormone insulin appropriately, the body cannot optimally manage blood sugar. Fish oil intake is associated with *improved* insulin sensitivity in people with some existing degree of metabolic disease.[11,15]

4. **Blood clotting**. Heart attacks and strokes are frequently caused by abnormal clotting (thrombosis) within blood vessels.[16] Higher intake of omega-3s can *reduce* the formation of blood clots.[17-19]

5. **Chronic inflammation**. Persistent inflammation is a major driver of **atherosclerosis**, the buildup of plaque in arteries. Omega-3s reduce the production of pro-inflammatory compounds and serve as precursors to *anti*-inflammatory compounds.[6-8,20,21]

The above actions may help slow or *halt* the development and progression of **cardiovascular disease**.

Observational Studies

The **omega-3 index** is a blood test that measures the percentage of omega-3s in the blood. The *higher* the number, the *more* **omega-3s** in the body.

An index of **8%** or higher is considered ideal.[22]

In an observational study that evaluated close to ***30,000 individuals***, having an **omega-3 index** of **8%** or greater predicted about a **30%** lower ***risk of death*** due to **coronary artery disease** than an omega-3 index below **4%**.[22]

The **Framingham Heart Study** is one of the largest and longest-running observational studies in existence.[2,23] It has consistently found that a *higher* omega-3 index is associated with significantly *lower* risk of **total mortality** and cardiovascular-related events such as **stroke** and **heart attack**.

The Framingham study even found that the **omega-3 index** is as good at predicting risk of death as factors like smoking, high blood pressure, diabetes, and age.[2] Those with a *higher* index live almost **five years longer** on average than those with a low index.

In one of the papers from the Framingham study, people with the highest omega-3 index levels compared to those with the lowest, had a **34%** lower risk of all cause mortality and their risk of developing cardiovascular diseases was **39%** lower.[23]