Fish oil

Health & Medicine

It also enhances insulin sensitivity in muscles and promotes the delivery of nutrients across the cell membrane. Furthermore, it is beneficial in the acceleration of metabolism and the reduction of triglyceride levels. Ultimately, omega-3 plays a crucial role in brain development, especially in babies and recent research shows that it is beneficial in treating cognitive conditions, dementia as well as Alzheimer's disease (Sears, 2014).

Pharmacokinetics and pharmacodynamic of fish oil

The digestion of fish oil occurs in the small intestines through the process of hydrolysis by the pancreatic lipase and bile salts to produce two fatty acids and a monoglyceride that are absorbed in the intestines and reassembled to triglycerides (Maroon, 2006). The triglycerides are transported into lymphatic channels and later into the bloodstream by chylomicrons (Maroon, 2006).

Bioavailability of fish oil

Bioavailability refers to the ability of the ingestible capsule of omega 3 fatty acids to be absorbed by the body into the bloodstream, tissues, and organs. Bioavailability is important because it determines the amount of capsule to be ingested for the proper effect on the body (Wexler, 2007). Research demonstrates that the most bioavailable fish oil is that with the re-esterified triglyceride form. Ingestion of omega-3 supplements is more effective after a meal as compared to ingestion on an empty stomach (Wexler, 2007).

Eskimo study

The risk of heart diseases is best prevented by lowering the levels of low-density lipoproteins (LDLS) and blood cholesterol and increasing high-density lipoproteins (HDLs) in the blood. Eskimos diet consists largely of fatty fish. It is noteworthy that obesity in this community is prevalent (Luten, 2006). Recent studies conducted on sardines and salmons, which are their main

food revealed that, albeit their heavyweights, high intake of fatty omega 3 from prevents some chronic diseases such as heart diseases and diabetes. This is because the high levels of omega 3 lower triglycerides, HDL, and LDL cholesterol that causes heart diseases are controlled by the fatty acids present in fish. The conditions explain why the Eskimo mortality rate from heart conditions is lower as compared to other regions (Luten, 2006).

Toxicity

Fish oil is a highly concentrated calorie source. There are no known and confirmed risks of toxicity associated with its normal intake. However, studies show that excess intake may result in vitamin A and D toxicity. The presence of heavy metals and other pollutants in fish is a potential hazard though these elements are negligible. The benefits associated with the consumption of fish oil outweigh the risks (Luten, 2006).