

The cardiovascular system consists of the heart and blood vessels. Heart disease is the biggest killer in North America. It includes structural or functional abnormalities of the heart, or of the blood vessels supplying the heart, that impair its normal functioning. Cholesterol contributes to buildup of plaque in the coronary arteries that restricts blood flow to the heart, causing chest pain, and possibly leading to heart attack and death.

In addition to eating a nutritious diet and getting adequate exercise, supplementation with coenzyme Q10 (CoQ10), tocotrienols, and fish oil can help maintain heart health.



necessary for the mitochondria to perform their functions and is essential for human life.” CoQ10 is most abundant in the heart, lungs, liver, kidneys, and spleen.

Without adequate levels of CoQ10, the body cannot produce adequate levels of ATP. When you consider that the average person uses 60 percent of his or her daily energy alone on base metabolism, you can see how important CoQ10 is in ensuring that the body is able to create enough energy for both its millions of everyday tasks and its special energy needs.

In the mid-1960s, Japanese professor Yamamura was the first clinician to use coenzyme Q7 (a compound related to CoQ10) in the treatment of congestive heart failure. Since then, numerous clinical trials have demonstrated the efficacy of CoQ10 in promoting cardiac health.

A recent literature review looked at clinical trials, articles, reviews, and letters published during the past 25 years in regard to the role of CoQ10 in heart failure. The review indicates that CoQ10 helps in how efficiently the heart pumps (ejection fraction), how well the heart functions when it is made to work harder (exercise tolerance), how much blood is pumped by the heart (stroke volume), and how much blood the heart can pump in one minute (cardiac output.) The abstract of the review indicates that “the use of CoQ10 as adjuvant therapy in patients with chronic heart failure may be supported.”

Japanese researchers have also found that CoQ10 supplementation prior to and immediately following open-heart surgery is highly beneficial in preventing injuries related to reperfusion, restoring blood flow to organs and tissues.

AIM CellSparc 360®

AIM CellSparc 360® combines CoQ10, tocotrienols, and fish oil to provide you with the ultimate heart health product. These three ingredients work together to ensure adequate energy production at the cellular level and to maintain a healthy lipid profile. They truly provide a synergistic effect for heart health.

Coenzyme Q10

All living cells require adenosine triphosphate (ATP) to function. ATP represents a major source of stored energy in the body and is responsible for many metabolic processes. CoQ10 is key in the production of ATP.

CoQ10, or ubiquinone, is found throughout the body in cell membranes, especially mitochondrial membranes, the areas of cells where food is converted to energy. According to an article in the *American Journal of Cardiology*, “Coenzyme Q10 is

Studies also indicate that CoQ10 supplementation may decrease the amount of medication used by heart disease patients, improve health as measured by the New York Heart Association functional scale, improve overall quality of life for heart patients, and act to maintain healthy blood pressure levels.

In addition to cardiac benefits, CoQ10 has been positively researched with regard to periodontal disease, athletic performance (stressful exercise reduces blood levels of CoQ10), muscular dystrophy, immunity and infections, and HIV.

CoQ10 also seems to be a helpful secondary therapy in some cancers. This is supported by research in regard to colon and prostatic cancers and anecdotal reports in relation to pancreatic and lung cancer.

Tocotrienols

Tocotrienols are a form of vitamin E. The term “vitamin E” actually describes a group of eight fat-soluble compounds—alpha-, beta-, delta-, and gamma-tocopherol and alpha-, beta-, delta-, and gamma-tocotrienol. Usually, vitamin E is loosely used to refer to as alpha-tocopherol.

Tocotrienols are found in cereal seeds and rice bran, and in palm and barley oils. Research indicates that tocotrienols have antitumor and antioxidant properties and may reduce cholesterol.

In one study, 90 people with high cholesterol levels followed the American Heart Association (AHA) Step-1 diet and took 100 mg of tocotrienols for a 35-day period. This program reduced their total cholesterol levels 20 percent and their LDL cholesterol levels—the “bad cholesterol”—25 percent compared to their cholesterol levels at the beginning of the study.

Another study shows that tocotrienols have 40 to 60 times more antioxidant ability than alpha-tocopherol—vitamin E.

Fish oil

Diets high in saturated fats have been linked to high blood cholesterol levels. Epidemiological studies have shown that in populations where large amounts of fish are consumed, there is little evidence of heart disease. The U.S. Physicians’ Health Study found that men who consumed fish one time per week cut their risk of sudden cardiac death by 52 percent compared with men who ate fish less than one time per month (Albert, et al. 1998).

A recent meta-analysis indicated that the use of dietary and supplemental omega-3 polyunsaturated fatty acids reduces overall mortality, mortality due to myocardial infarction, and sudden death in patients with coronary heart disease.

Fish oil has also been found to help reduce triglyceride—a type of fat—levels. High triglyceride levels are a factor in heart disease.

Fish oils are rich in eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), which are believed to decrease the risk of thrombosis (blood clot) and lower blood pressure.

In addition to its health benefits, fish oil is used in AIM CellSparc 360[®] as a dissolvent for the CoQ10 and tocotrienols. Dr. Karl Folkers, the doctor responsible for much of the research on CoQ10, recommends that it be dissolved in oil. Because CoQ10 is fat-soluble, it requires fat to be absorbed by the digestive tract.

AIM CellSparc 360[®]

You will find that AIM CellSparc 360[®] is superior to other CoQ10 products on the market. AIM Members have a product that combines 60 mg of CoQ10 with 100 mg of tocotrienols and 240 mg of fish oil in a convenient softgel capsule. AIM CellSparc 360[®] contains no artificial flavors or fillers, such as yeast, egg, or milk derivatives. The softgel format also gives you increased bioavailability, stability, purity, and consistency.

How to use AIM CellSparc 360®

- Suggested use: 1 to 2 softgel capsules per day. Although the inclusion of the fish oil diluent helps improve absorption of the CoQ10, it is still recommended that you take the capsules with meals. Some people feel immediate benefits; others notice results after 6 to 8 weeks.
- Close tightly after opening and store in a cool, dry, dark place (70-75 °F; 20.1-23.8 °C). Do not refrigerate.
- If pregnant or nursing, consult a health practitioner.
- Diabetics should consult a health practitioner.

Coenzyme Q10 and human nutrition

CoQ10 is found in the foods we eat, but not often in large amounts. The best sources of CoQ10 are animal organs, some types of fish, and vegetable oils such as soybean, rapeseed, and sesame. It is found in lesser quantities in rice bran and wheat germ and in soy and other beans. It is also found in vegetables, in particular spinach and broccoli. CoQ10 is easily destroyed in the cooking process, and much of the CoQ10 is removed in refined grains.

The body can also manufacture CoQ10 from other members of the coenzyme Q (CoQ) family. CoQ10 is but one of 10, and possibly more, members of the CoQ family. A meal consisting of shellfish, vegetables, and mushrooms provides CoQ9 and CoQ7. To change these CoQs into CoQ10, the liver breaks them down and reassembles them.

The creation of CoQ10 by the body is a complex process. At least three different classes of starting molecules are required, at least 15 different reactions are necessary (each begun by an enzyme), and many cofactor substances are involved. Because all the component parts must be available in sufficient quantities at the same time, CoQ10 is difficult for the body to produce. Some of the essential cofac-

tors are not created by the body. A deficiency in any of these—vitamins B3, B5, B6, B12, C, and folate—would make it difficult for the liver to produce enough CoQ10. Unfortunately, the older you get, the less ability you have to produce CoQ10 from other members of the CoQ family.

Our lives and environments also affect CoQ10 levels, in that stressful lives and polluted environments can deplete CoQ10 from body tissue.

According to Dr. Folkers, these factors—nutrient deficiencies, age, stress, and pollution—could lead to a deficiency of CoQ10. By some estimates, as many as 75 percent of people over age 50 in the United States could be deficient in CoQ10.

Q & A

Why should I take AIM CellSparc 360®?

Studies have found that as we age, our bodies cannot produce CoQ10 as efficiently and its supply diminishes. It is important to keep adequate levels of CoQ10 in our bodies. However, finding healthy food sources of CoQ10 can be difficult. The best sources of CoQ10 are animal muscle tissues, but many people prefer not to eat this type of food. The CoQ10 in AIM CellSparc 360® is produced from plant sources. Using it provides a way of maintaining the body's level of CoQ10 without compromising other dietary considerations.

Can I take more than the suggested amount?

AIM CellSparc 360® is nontoxic, so larger amounts are acceptable, depending on your assessment of your nutritional needs.

Why must I store AIM CellSparc 360® in a cool, dry, dark place?

Because the CoQ10 used in AIM CellSparc 360® is so pure, it has a relatively low melting temperature. This will not hurt the efficacy of the product. However, heat, humidity, and sunlight could cause the softgels to stick together.

Benefits and Features

Benefits

- Helps maintain cardiovascular health
- Helps maintain healthy triglyceride levels
- Helps maintain healthy cholesterol levels
- Helps maintain gum health
- Increases energy production at the cellular level
- Potent antioxidant
- Quick absorption into the bloodstream

Features

- More than six years of safe and beneficial use by AIM Members
- Unique formula contains 60 mg of coenzyme Q10, 100 mg of tocotrienols, and 240 mg of fish oil per softgel capsule
- Japanese source of coenzyme Q10
- Coenzyme Q10 derived from a plant source
- No harsh solvents used in coenzyme Q10 extraction process
- Softgel delivery system means quicker absorption
- 30-softgel capsules

AIM CellSparc 360[®] is a Cardio Health product. The complete Cardio Health line consists of AIM CellSparc 360[®] and AIM Bear Paw Garlic[®]. Use these products to help yourself maintain cardiovascular health.

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