

Co-Q10 stands for Co-enzyme Q10. Co-Q10 belongs to a family of substances called ubiquinones. Like enzymes, CoQ10 is a catalyst which facilitates biochemical reactions. In this case, the body uses CoQ10 primarily for energy production at the cellular level. It is used inside the mitochondria—our sub-cellular power plants—for electron transport and facilitates the production of ATP, the basic energy molecule in the cell.

Co-Q10 also has important anti-oxidant functions. Oxidative damage occurs in the body when free radicals—molecules with harmful levels of oxygen—damage cell membranes or cell DNA or RNA. These free radicals can also create more of themselves from any molecules they bump into. Co-Q10 fights this process by adding or taking away oxygen from other molecules. It increases oxygen levels when needed and reduces them if they approach toxic levels. This anti-oxidant behavior benefits every system in the body, especially since the process of aging is strongly linked to oxidative damage. Co-Q10's antioxidant properties may help inhibit damage to the nerves from environmental toxins and prevent the development of cancer.

Most of the research on Co-Q10 has focused on the heart which makes sense if you think of how hard the heart works and its high energy requirements. Co-Q10 has been found to strengthen the heart in people who have suffered heart disease and to protect it from further damage. Large doses have also helped people recover from heart attacks. Other studies have documented Co-Q10's ability to balance both low and high blood pressure.

Co-Q10 has a beneficial effect on periodontal disease. It helps reduce inflammation in gingivitis (inflammation of the gums) and healing pockets in the gums. Since heart disease is also caused by inflammation and there is a link between gum inflammation and inflammation of the blood vessels, bleeding gums are a good indicator that supplementation with Co-Q10 may be beneficial.

Unfortunately, although Co-Q10 is found in many foods, the levels in our bodies decline with age. With supplementation, we can ensure that our cells, and especially our hearts, stay strong and are protected from free radical damage.

For those who wish to supplement their diets with Co-Q10, here are three different Co-Q10 supplements to chose from:

#### Co-Q10 30

This blend contains 30 mg of Co-Q10 per capsule—10 to 30 mg is the range recommended for maintenance doses. It also contains the minerals zinc, copper and magnesium, and the herbs capsicum, hawthorn and ginkgo.

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Seek appropriate professional assistance for all serious health problems. Handout prepared by Tree of Light Publishing P.O. Box 911239, St. George, UT 84791 (www.treelite.com) ©2005 May be reproduced provided it is not altered in any way. Aside from being an important anti-oxidant in its own right, zinc is required by the body in large doses for proper maintenance of the glandular system, production of insulin, proper brain function and the synthesis of DNA.

Copper is required to produce many of the enzymes that our bodies use for processes ranging from creation of red blood cells to oxygen transport and destruction of free radicals. Magnesium is another mineral needed in large doses to control movement of water across cell membranes, regulate the acid-alkaline balance, and carry electrical currents.

Capsicum is widely recognized as a powerful tonic, especially to the circulatory system, and a catalyst in its own right that aids the diffusion of other substances to every part of the body. Hawthorn has a long history of use as a cardiotonic and an anti-inflammatory for the circulatory system. Gingko has been shown to protect various organs from free radical damage, as well as to increase circulation to the brain, the heart and other organs. It also blocks an allergic substance called platelet-activating factor which may play a part in asthma, skin disorders, hearing problems and heart disease.

Co-Q10 30 is a good choice for basic prevention and heart health. One capsule should be taken with a meal three times daily.

# Co-Q10 Plus

Co-Q10 Plus capsules contain 10 mg. of the co-enzyme. Like the Co-Q10 30 caps, they provide the benefits of copper, magnesium, zinc, capsicum and hawthorn. In addition, they contain iron, which is necessary for proper functioning of both the brain and the heart. For this product, take one to three capsules three times daily with food.

# Co-Q10 Softgel

Co-Q10 Softgels contain 75 mg. of Co-Q10 per gel capsule, along with lecithin, an anti-oxidant which also boosts circulation and reduces fatty deposits in the blood vessels, and betacarotene, another anti-oxidant and top-notch heart protector. Since Co-Q10 is a fat soluble substance, the Co-Q10 in this product is more easily assimilated. This is the best choice for taking higher doses of Co-Q10 (75 to 225 milligrams per day) for serious cardiovascular or gum disease problems.

# Selected References

The Comprehensive Guide to Nature's Sunshine Products by Steven Horne. PDR for Nutritional Supplements by Medical Economics Press The Encyclopedia of Medicinal Plants by Andrew Chevallier.

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