



CoQ10 100mg

What is Coenzyme Q10?

Coenzyme Q10 (CoQ10), also known as ubiquinone or ubiquinone, is a vitamin-like, naturally-occurring nutrient that plays a vital role in cellular energy production.^[1] It is present in most tissues with the highest concentrations in the heart, liver, kidneys and pancreas.^[2]

CoQ10 is essential for maintaining life and producing energy by our cellular “power house” – the mitochondria.^[1] Without CoQ10, our body will not be able to function properly. CoQ10 also acts a strong antioxidant and free radical scavenger, and helps maintain peripheral circulation and cell membrane integrity.^[1,3-6]

Why do we need Coenzyme Q10?

Our body can synthesize CoQ10 but age and diseases lowered our production ability.^[7] Habits like smoking further deplete our CoQ10 store.^[8] Low CoQ10 levels have been associated with diseases of the heart, muscle, brain, nervous system, eyes, etc.^[9] Therefore, we may need to replenish the body store by taking CoQ10 in order to maintain normal cellular function and good health.

Health Facts about Coenzyme Q10

Super Antioxidant

Mitochondria are the major location of reactive oxygen species (ROS) production in cells. Accumulation of free radicals in tissues can result in cell death and aging. Excessive cell death is a characteristic of many neurological disorders including stroke, ischemia (reduced blood supply to certain part of the body), and Alzheimer's disease.^[1] CoQ10 could reduce the amount of mitochondrial ROS and scavenge free radicals while serving as an antioxidant.^[1,4-6] Its anti-oxidizing power is even stronger than vitamin E!^[3]

Cardiovascular health

Cardiac muscle is working 24-7. The cardiac muscle cells are constantly under oxidative stress imposed by the mitochondria during the energy production process. On the other hand, studies have found that superoxide dismutase (SOD) activity is substantially reduced in patients with coronary artery disease.^[10] CoQ10 has been shown to enhance the activity of SOD, promote vasodilation, improve cardiac muscle bioenergetics and attenuate blood vessel dysfunction.^[3,10-11] CoQ10 helps to maintain a healthy cardiovascular system.^[4-6]

Rejuvenate skin

A study revealed that CoQ10 inhibits ultraviolet B-induced wrinkle formation.^[12] The results indicated that CoQ10 inhibits the production of collagenase, an enzyme that degrades collagen fibers. Its inhibition by CoQ10 likely contributed to protect dermal fiber composition from degradation, leading to rejuvenation of wrinkled skin. Anti-oxidative property of CoQ10 also contributes substantially to protect skin cells from oxidative damages, helping to delay aging.^[4-6,12]

Brain and nervous system functions

CoQ10 exerts neuroprotective effects in both cellular and animal models of neurodegenerative disorders. By stabilizing mitochondrial membrane and delaying degeneration of brain nerve cells, CoQ10 may ease the symptoms of Parkinson's disease.^[5,13]

CoQ10 levels in the retina can decline by 40% with age. This decline may have two consequences: a decrease in antioxidant ability and a decrease in the rate of energy production in the retina and, as such, this decline may be linked to the progression of macular degeneration.^[14-15]

Functions of Coenzyme Q10

- Help maintain health of cardiovascular system^[3-6,10-11]
- Help to maintain general health and boost up immune system^[4-5]
- Strong antioxidant to protect cells from free radicals^[1,3-6,12]

- Increase energy and body strength by revitalization of body cells^[5,11]
- Slow down body and brain degeneration rate^[1,3-5,13-15]
- Support neurological health and reduce migraine frequency^[5]
- Decelerate aging process^[4-6,12]
- Improve sperm density and motility^[5,16]

Recommended daily dose:

Adults take 1-4 softgel capsules daily after meal or as directed by physicians.

References:

1. Somayajulu M, McCarthy S, Hung M, Sikorska M, Borowy-Borowski H, Pandey S. Role of mitochondria in neuronal cell death induced by oxidative stress; neuroprotection by Coenzyme Q10. *Neurobiol Dis.* 2005;18(3):618-27.
2. Sourris KC, Harcourt BE, Tang PH, Morley AL, Huynh K et al. Ubiquinone (coenzyme Q10) prevents renal mitochondrial dysfunction in an experimental model of type 2 diabetes. *Free Radic Biol Med.* 2012;52(3):716-23.
3. Watts GF, Playford DA, Croft KD, Ward NC, Mori TA, Burke V. Coenzyme Q10 improves endothelial dysfunction of the brachial artery in Type II diabetes mellitus. *Diabetologia.* 2002;45(3):420-6.
4. Coenzyme Q10 (Ubiquinone-10). Health Canada: Natural Health Product Ingredients Database. Available online at <http://www.hc-sc.gc.ca>
5. Coenzyme Q. Dietary Supplements. Available online at <http://www.medicinescomplete.com>
6. Ubidecarenone. Martindale: The Complete Drug Reference. Available online at <http://www.medicinescomplete.com>
7. Wada H, Goto H, Hagiwara S, Yamamoto Y. Redox status of coenzyme Q10 is associated with chronological age. *J Am Geriatr Soc.* 2007;55(7):1141-2.
8. National Library of Medicine, National Institutes of Health. Coenzyme Q-10: MedlinePlus Supplements. Last Update: 21 Oct 2011. Available at: <http://www.nlm.nih.gov/medlineplus/druginfo/natural/938.html>.
9. Quinzii CM, Hirano M. Primary and secondary CoQ10 deficiencies in humans. *Biofactors.* 2011;37(5):361-5.
10. Tian L, Belardinelli R, Carnevali P, Principi F, Seddaiu G, Littarru GP. Effect of coenzyme Q10 administration on endothelial function and extracellular superoxide dismutase in patients with ischaemic heart disease: a double-blind, randomized controlled study. *Eur Heart J.* 2007;28(18):2249-55.
11. Littarru GP, Tian L. Clinical aspects of coenzyme Q10: an update. *Curr Opin Clin Nutr Metab Care.* 2005;8(6):641-6.
12. Littarru GP, Tian L. Clinical aspects of coenzyme Q10: an update. *Nutrition.* 2010;26(3):250-4.
13. Chaturvedi RK, Beal MF. Mitochondrial approaches for neuroprotection. *Ann N Y Acad Sci.* 2008;1147:395-412.
14. Qu J, Kaufman Y, Washington I. Coenzyme Q10 in the human retina. *Invest Ophthalmol Vis Sci.* 2009;50(4):1814-8.
15. Pinar-Sueiro S, Martínez-Fernández R, Lage-Medina S, Aldamiz-Echevarria L, Vecino E. Optic neuropathy in methylmalonic acidemia: the role of neuroprotection. *J Inher Metab Dis.* 2010 May 7, doi: 10.1007/s10545-010-9084-8.
16. Safarinejad MR. Efficacy of coenzyme Q10 on semen parameters, sperm function and reproductive hormones in infertile men. *J Urol.* 2009;182(1):237-48.

Disclaimer: This product is not registered under the Pharmacy and Poisons Ordinance or the Chinese Medicine Ordinance. Any claim made for it has not been subject to evaluation for such registration. This product is not intended to diagnose, treat or prevent any disease.

免責聲明：此產品沒有根據《藥劑業及毒藥條例》或《中醫藥條例》註冊。為此產品作出的任何聲稱亦沒有為進行該等註冊而接受評核。此產品並不供作診斷、治療或預防任何疾病之用。