

..... CONNECT WITH

Solgar's CoQ-10



Energy Production*

Heart Health*

Antioxidant Support*

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CoQ-10 plays a key role in energy production and contributes to the body's total energy levels.*

What Is CoQ-10?

Coenzyme Q-10 (CoQ-10) is a vitamin-like nutrient that plays a key role in energy production in every cell; in the process, it collectively contributes to the body's total energy levels.* CoQ-10 also functions as an antioxidant and assists in protecting cells from free radical damage.* Additionally, it helps support heart and brain health.*

Ubiquinone is the chemical name for the most common supplemental form of CoQ-10. The body routinely converts ubiquinone to ubiquinol, the reduced form of CoQ-10 that is sometimes incorrectly referred to as the "active" form. Both ubiquinone and ubiquinol are active and required for biochemical reactions within cells and play vital roles in energy production and heart health.*

Some people cannot optimally convert ubiquinone to ubiquinol in their cell membranes for full antioxidant protection.*¹ They might prefer to supplement with ubiquinol because it can be easily assimilated since it does not require conversion.

WHO SHOULD CONSIDER TAKING CoQ-10 SUPPLEMENTS?

Those looking for antioxidant and energy support*

Those seeking to support heart and brain health*

Those taking cholesterol-lowering statin medications*

Those concerned with aging

Vegetarians (CoQ-10 is naturally found in foods, predominantly in meat and fish)

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CoQ-10 and Energy Production*

Found in all tissues of the body, CoQ-10 plays a major role in the production of adenosine triphosphate (ATP), the chemical form of energy in the body. This process takes place in tiny cell structures called mitochondria, where the body continuously converts ubiquinone to ubiquinol back and forth many times a second.^{2,3} The most energetic cells of the body—heart, skeletal muscles, brain, and liver—contain the largest numbers of mitochondria and consequently have the greatest biological requirements for CoQ-10.

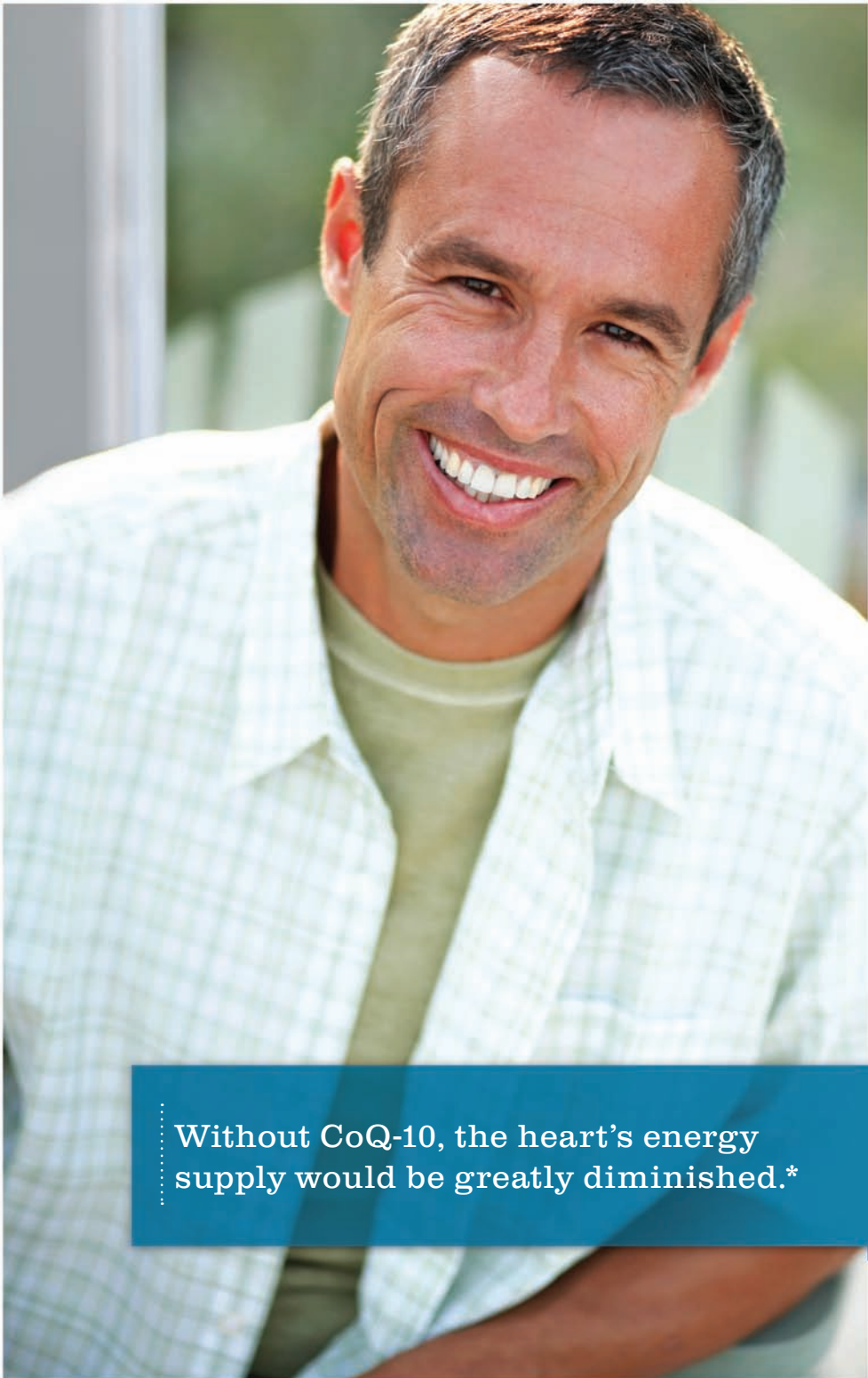
Studies have demonstrated that CoQ-10 supplements can boost energy levels, enhance stamina, and improve recovery time after exercise.* In one study, researchers reported that people were able to cycle faster and have quicker recovery times after just one week of taking 300 mg of CoQ-10 daily.⁴ Another study found that both trained and untrained men and women had greater endurance after taking 200 mg of CoQ-10 daily for two weeks.⁵ In addition, a medical journal report described how CoQ-10 supplements led to improved energy levels among octogenarians.⁶



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A young woman with dark hair in a ponytail, wearing a white tank top and earbuds, is running on a treadmill in a gym. She is smiling and looking to the side. A blue banner with white text is overlaid on the bottom right of the image.

Studies indicate that CoQ-10 supplements can boost energy levels, enhance stamina, and improve recovery time after exercise.*



..... Without CoQ-10, the heart's energy
..... supply would be greatly diminished.*

CoQ-10 and Heart Health*

The heart has enormous energy requirements; it beats 100,000 times each day, 37 million times a year, and 2.5 billion times in a lifetime. All of this activity depends in part on the presence of CoQ-10 in heart cells. Without CoQ-10, the heart's energy supply would be greatly diminished.* In addition, the heart may be especially prone to a reduction in CoQ-10 levels as we age.⁷ Studied for more than 30 years, research supports the positive role CoQ-10 plays in promoting heart health.*⁸⁻¹⁰

Statin-class cholesterol-lowering drugs may deplete CoQ-10 levels in some people and therefore increase their CoQ-10 requirements. Statins work by inhibiting an enzyme known as HMG CoA reductase, which regulates production of both cholesterol and CoQ-10. Thus, when statins lower cholesterol production, they also reduce CoQ-10 production.

NOTE: CoQ-10 is not intended to serve as a replacement for Statin Therapy, nor should you discontinue taking any prescribed medications while supplementing with CoQ-10.



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CoQ-10 and Antioxidant Support*

Free radicals, or oxidants, damage cells and contribute to the aging process. Antioxidants protect against much of this damage. As a fat-soluble antioxidant, CoQ-10 helps protect against free radical damage in fatty tissue, such as cell membranes. It also enhances the activity of other antioxidants.

CoQ-10 and Aging*

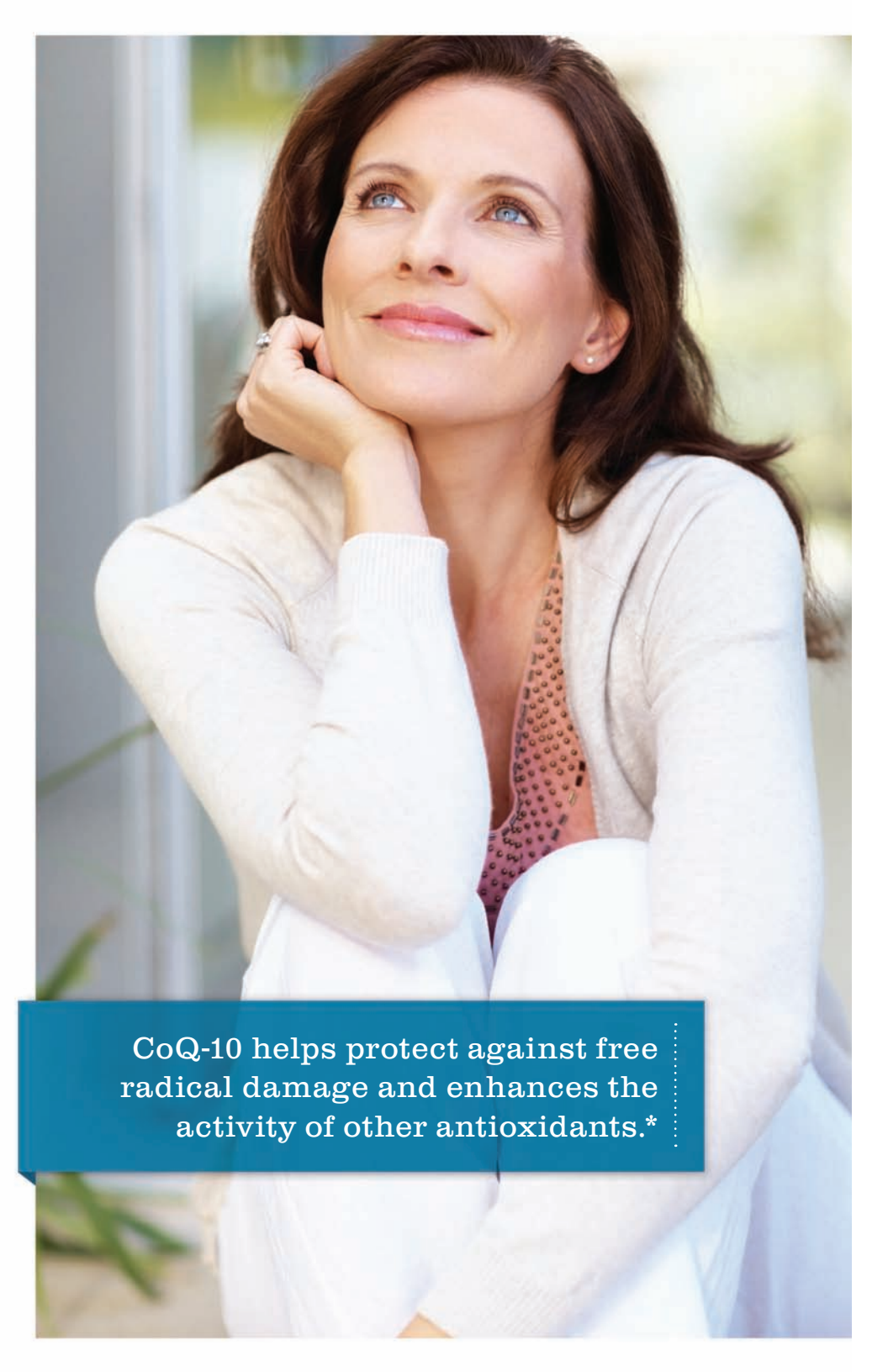
CoQ-10 levels may decline as we age. Considerable evidence indicates that decreased production of ATP by mitochondria plays a role in the aging process.¹¹⁻¹⁴ Because CoQ-10 is crucial for the production of ATP, CoQ-10 may support healthy aging.*

CoQ-10 and Brain Health*

Studies indicate that CoQ-10 may promote brain and nervous system health.¹⁵⁻¹⁹



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CoQ-10 helps protect against free radical damage and enhances the activity of other antioxidants.*



Solgar's CoQ-10 products are available in a broad range of potencies.



What's So Special about Solgar's CoQ-10?

For more than 60 years, quality has been Solgar's guiding principle. Everything we do—from choosing the finest natural raw materials, to state-of-the-art manufacturing, to the premium product that appears on the shelf—must meet our own Gold Standard™ of excellence.

That's why Solgar's CoQ-10 formulas supply KanekaQ10™, an all-natural, clinically researched form of CoQ-10 bio-identical to the kind produced in the body. Made in the U.S. and studied for more than 30 years, KanekaQ10™ is sourced from fermented yeast unlike most CoQ-10 products which are derived from tobacco or bacteria. Solgar also offers KanekaQH™ ubiquinol, which is made from KanekaQ10™.

Solgar's CoQ-10 products are available in kosher-certified and vegetarian formulas, vegetable capsules and softgels, and a broad range of potencies from 30 mg–600 mg. Solgar also offers Megasorb formulas which provide CoQ-10 in a base of rice bran oil to promote enhanced absorption.* Plus, Solgar's CoQ-10 formulas are free of gluten, wheat, and dairy.

For more information on Solgar's CoQ-10 products, please visit www.solgar.com.



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REFERENCES:

1. Ross D et al. NAD(P)H:quinone oxidoreductase 1 (NQO1): chemoprotection, bioactivation, gene regulation and genetic polymorphisms. *Chem Biol Interact.* 2000;129(1-2):77-97.
2. Nohl H et al. The biochemical, pathophysiological, and medical aspects of ubiquinone function. *Ann N Y Acad Sci.* 1998;854:394-409.
3. Littarru GP and L Tiano. Bioenergetic and antioxidant properties of coenzyme Q10: recent developments. *Mol Biotechnol.* 2007;37(1):31-7.
4. Mizuno K et al. Antifatigue effects of coenzyme Q10 during physical fatigue. *Nutrition.* 2008;24(4):293-9.
5. Cooke M et al. Effects of acute and 14-day coenzyme Q10 supplementation on exercise performance in both trained and untrained individuals. *J Int Soc Sports Nutr.* 2008;5:8.
6. Langsjoen PH et al. The aging heart: reversal of diastolic dysfunction in the elderly with oral coenzyme Q10. In: *Anti-Aging Medical Therapeutics.* Editors: Klatz RM, Goldman R. Marina Del Rey, California: Health Quest Publications, 1997:113-20.
7. Kalen A et al. Age-related changes in the lipid compositions of rat and human tissues. *Lipids.* 1989;24(7):579-84.
8. Tiano L et al. 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.
9. Burke BE et al. Randomized, double-blind, placebo-controlled trial of coenzyme Q10 in isolated systolic hypertension. *South Med J.* 2001;94(11):1112-7.
10. Langsjoen H et al. Usefulness of coenzyme Q10 in clinical cardiology: a long-term study. *Mol Aspects Med.* 1994;15 Suppl:s165-75.
11. Robb EL et al. Mitochondria, cellular stress resistance, somatic cell depletion and lifespan. *Curr Aging Sci.* 2009;2(1):12-27.
12. Dietrich MO and TL Horvath. The role of mitochondrial uncoupling proteins in lifespan. *Pflugers Arch.* 2010;459(2):269-75.
13. Wei YH et al. Respiratory function decline and DNA mutation in mitochondria, oxidative stress and altered gene expression during aging. *Chang Gung Med J.* 2009;32(2):113-32.
14. Gruber J et al. The mitochondrial free radical theory of ageing—where do we stand? *Front Biosci.* 2008;13:6554-79.
15. Shults CW et al. Effects of coenzyme Q10 in early Parkinson disease: evidence of slowing of the functional decline. *Arch Neurol.* 2002;59(10):1541-50.
16. Muller T et al. Coenzyme Q10 supplementation provides mild symptomatic benefit in patients with Parkinson's disease. *Neurosci Lett.* 2003;341(3):201-4.
17. Hart PE et al. Antioxidant treatment of patients with Friedreich ataxia: four-year follow up. *Arch Neurol.* 2005;62(4):621-6.
18. Musumeci O et al. Familial cerebellar ataxia with muscle coenzyme Q10 deficiency. *Neurology.* 2001;56(7):849-55.
19. Artuch R et al. Cerebellar ataxia with coenzyme Q10 deficiency: diagnosis and follow-up after coenzyme Q10 supplementation. *J Neurol Sci.* 2006;246(1-2):153-8.

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