What is Coenzyme Q10?

Coenzyme Q10 (CoQ10 or Ubiquinone) was discovered by Professor F.L. Crane, at the University of Wisconsin in 1957. He extracted it from mitochondria, the minute power houses present in each cell of our body. It was given the name ubiquinone from the word “ubiquitous” meaning “everywhere”, as it occurs in every cell in our body where it assists in the production of energy from foods. It can be produced by the body but deficiencies may occur in individuals with an increased demand for CoQ10. Such individuals include the elderly and individuals with high stress levels, infection or an impaired ability to manufacture it in the body. This may be due to nutrient deficiencies- simply not consuming enough CoQ10 dense foods. It may also be due to a genetic or an acquired defect in the ability to manufacture CoQ10. CoQ10 works with Vitamin E and Vitamin B5 and Carnitine, (an amino acid derived from proteins).

Why is Coenzyme Q10 (CoQ10) important and what does it do in the body?

As its name implies Coenzyme Q10 (CoQ10) is a cofactor that acts very much like the spark plug to an engine in driving chemical reactions in the body. It is particularly important for energy production the mitochondria - our cells’ power houses, it is very concentrated in the active tissues of the body such as muscles and the heart. If the levels of CoQ10 drop to below 25% in the body, degenerative diseases and illnesses such as heart disease, heart failure and high blood pressure may occur. If CoQ10 levels drop below 75% this is not compatible with life as there is insufficient energy production in every cell of the body.

CoQ10 also has the ability to act as an antioxidant and neutralizing free radicals (these are toxins and unstable molecules that damage our bodies). Together with Vitamin E, CoQ10 protects our crucial fat (lipid) membranes such as our nerve cells and other cell membranes and also reduce the aging process. CoQ10 is also associated with reducing the risk of heart disease, cardio-myopathy (damaged heart muscles) and atherosclerosis (thickening of the arteries). CoQ10 is also known for reducing “bad fats” such as saturated fats including low density lipoproteins, hydrogenated fats and transfats in the blood system. It may also reduce the risk of developing cancer.

CoQ10 supports the immune system by increasing the activity of our white cells and has also been used to support individuals with low sperm count and sperm motility, Parkinson’s disease, migraines, mitral valve prolapse, high blood pressure, periodontal disease, diabetes and immune deficiency.
What amount of CoQ10 do you need each day?

The usual dosage of CoQ10 is between 20 and 120mg per day. This may increase to 300mg in individuals who require a higher dose dependent related to a particular health problem or concern. Some studies suggest that for each kilo gram (kg) of body weight, we need a dosage of 2mg of CoQ10. As an example, a man weighing 100kg would require 200mg of CoQ10 daily.

The DRI (Daily Recommended Intake) /RDA (Recommended Daily Allowance) of dietary CoQ10 are listed below:

Please Note: By definition, the DRI/RDA recommendations apply only to 98% of healthy individuals and are not sufficient for those with higher nutrient requirements based upon their biochemical individuality, genetics, health status, medications, deficiencies, lifestyle, and toxic exposures.

RECOMMENDED DAILY ALLOWANCE 20mg/Day
OPTIMAL DAILY ALLOWANCE 120mg/Day
What are possible CoQ10 deficiency conditions and symptoms?

- Angina
- Coronary artery bypass surgery
- Diabetes
- High blood pressure (hypertension)
- Immune deficiency
- Lack of energy
- Low exercise tolerance
- Low sperm count
- Migraines
- Parkinson’s disease
- Periodontal disease
- Prolapsed Mitral Valve

What are possible CoQ10 excess symptoms?

No reported side effects have been reported with excess CoQ10 but safety for use during pregnancy or lactation has not been proven. CoQ10 should only be used under the guidance of your health care professional.

What steals CoQ10 from the body?

- Anti-arrhythmia drugs including beta blocker drugs: Propanolol (Inderal) and Metoprolol (Lopressor).
- Psychiatric Medications including: Tricyclic Antidepressants: Amitriptyline (Elavil), Nortriptyline (Pamelor), Imipramine(Tofranil), Desipramine (Norpramin), Doxepin (Sinequan)
- Antipsychotic agents: Chlorpromazine (Thorazine), Thiopenthal (Navane), Thoridazine (Mellaril), Fluphenazine esters (Prolixin)

What tests can be used to assess CoQ10 levels?

- Coenzyme Q10 in blood serum
- Urinary levels of Hydroxymethylglutarate, lactate, fumarate, succinate, malate, pyruvate
What foods contain the highest amounts of CoQ10?

**TOP 10 CoQ10 RICH FOODS ARE:**

1. **Soya Oil**  
   9.2mg/100g
2. **Sardines**  
   6.4mg/100g
3. **Mackerel**  
   4.3mg/100g
4. **Pork**  
   3.2mg/100g
5. **Beef**  
   3.0mg/100g
6. **Herring**  
   2.7mg/100g
7. **Peanuts**  
   2.7mg/100g
8. **Sesame seeds**  
   2.3mg/100g
9. **Walnuts**  
   1.9mg/100g
10. **Chicken**  
    1.6mg/100g

What are the best CoQ10 products to purchase?

Ubiquinone derived from live natural sources.

**REFERENCES**

- Shannon, Michael. Dr. Complete Nutrition
- Murray, T. Michael. Encyclopedia of Nutritional Supplements
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- Groff, Advanced Nutrition and Human Metabolism 5th 2009
- Gibson Principles of Nutritional Assessment 2nd Ed. 2007
- Office of Dietary Supplements, NIH Fact sheets 2010
- Balch, A. Phyllis CNC Prescription for Nutritional Healing

All the statements, including product labels, supporting literature and/or product manufacturers websites have not been evaluated by FDA. These products are not intended to diagnose, treat, cure or prevent any disease.
Coenzyme Q10 (CoQ10 or Ubiquinone)

What are the very best CoQ10 products to purchase?

**PRL CoQ10**
Dietary Supplement
Live-Source CoQ-10 (100 mg/cap)
Premier Cardiovascular, Nerve, Brain and Immune Support
Premier CoQ-10 contains premier quality …

**ProThera CoQ-H**
Reduced ubiquinol form of coenzyme Q10.
Coenzyme Q10 (CoQ10) exists in two beneficial forms, ubiquinone and ubiquinol, that are continually recycled in the body through an oxidation-reduction reaction within cellular …

**Pure Caps Womens Pure Pack**
Women’s Supplement to Support Bone and Heart Health. Now With Metafolin® L-5-MTHF. Sizes Available 30 packets. Each packet contains 6 different supplements, including …

**Pure Caps Mens Pure Pack**
Regardless of your walk of life, all men need to ensure that they get enough of an array of important nutrients. However, who wants to spend their time picking out supplements for a daily …