

# Coenzyme Q<sub>10</sub>

Depression has many causes, and among them are inflammation, oxidative stress, and problems with energy production in the mitochondria (a component of all living cells). Coenzyme Q<sub>10</sub> (CoQ10) addresses all of these causes. In controlled studies, it has improved bipolar depression; energy and depression in people with multiple sclerosis; and sense of wellbeing and vitality in older adults and war veterans.

CoQ10 protects brain cells and has potential benefits in migraines and dementia. Medical conditions that benefit from CoQ10 include high blood pressure, heart disease, diabetes, fibromyalgia, and cancer.

The average diet provides about 3-6 mg of CoQ10 a day, from foods like:

- Cold water fish, like tuna, salmon, mackerel, and sardines
- Vegetable oils (canola, soybean, olive, grapeseed, sunflower)
- Meats (chicken, red meat)
- Nuts, parsley, broccoli, cauliflower, spinach

CoQ10 levels can fall with increasing age, depression, and medical problems.

<b>Quick Facts: Coenzyme Q10</b>	
How natural?	It occurs naturally in the body and is part of our diet.
Mental benefits	Depression, energy, well-being, memory
Side effects	Rare. Possible diarrhea, nausea, and heartburn.
How to find it	We keep updated links to the best product for the price at: <a href="http://www.moodtreatment.com/products">www.moodtreatment.com/products</a> (under Vitamins & Herbs)
Dose	For depression: 200mg daily (or 100mg twice a day)

## How to take it

You can take the dose in the morning or night, though it may interfere with sleep. It is absorbed a little better with food. If you have stomach side effects, spread the dose throughout the day, otherwise take it all at once.

## Warnings

CoQ10 has been used to improve sugar control in diabetes, but it can lower blood sugar so people with diabetes should consult with their physician before starting it. CoQ10 may interfere with warfarin, a blood thinner.

## Which product should I buy?

We keep updated links to the best product for the cost at [moodtreatmentcenter.com/products](http://moodtreatmentcenter.com/products) (click on Vitamins & Herbs).

Consumer Labs tested 18 products and found that only one did not have the correct ingredients (Doctor's Best VesiSorb CoQ10 with Omega 3; it had only 70% of the stated amount. Other Doctor's Best products are OK).

CoQ10 is difficult to absorb, so some products have ingredients to aid absorption (polysorbate 80, black pepper extract, Nano, and Q-Gel formulations). Taking it with a fatty meal also helps. It can also be taken as ubiquinol, a more expensive form that bypasses some of those absorption problems. In the depression research, regular CoQ10 was used.

Consumer Labs recommended these products for their overall price and quality at the 200mg dose:

**Regular absorption:**

- Berkley Jensen CoQ10 (16¢/day)
- 21<sup>st</sup> Century CoQ10 (18¢/day)
- Member's Mark CoQ10 (22¢/day)
- Spring Valley (Walmart) CoQ10 (22-41¢/day)

**Enhanced absorption:**

- Doctor's Best High Absorption CoQ10 with bioperine (21¢/day)



**References**

1. Mehrpooya M, Yasrebifar F, Haghghi M, et al. Evaluating the effect of Coenzyme Q10 augmentation on treatment of bipolar depression: A double-blind controlled clinical trial. *J Clin Psychopharmacol*, 2018;38(5):460-466.
2. Golomb BA, Allison M, Koperski S, et al. Coenzyme Q10 benefits symptoms in Gulf War veterans: results of a randomized double-blind study. *Neural Comput*, 2014;26(11):2594-651.
3. Sanoobar M, Dehghan P, Khalili M, et al. Coenzyme Q10 as a treatment for fatigue and depression in multiple sclerosis patients: A double blind randomized clinical trial. *Nutr Neurosci*, 2016;19(3):138-43.

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