

Ubiquinone: Supporting Cellular Energy and Cognitive Wellness

Ubiquinone, also known as coenzyme Q10 or CoQ10, is a naturally occurring compound found in nearly every cell of the body. It plays an important role in mitochondrial energy production and also functions as an antioxidant within cell membranes.

Ubiquinone powder is included in **ActivPower COGNEX™** as part of a comprehensive nutritional approach designed to support cognitive wellness, cellular energy, and everyday vitality.

What Is Ubiquinone?

Ubiquinone is the oxidized form of CoQ10. The body can convert ubiquinone into ubiquinol, its reduced antioxidant form. Both forms participate in normal cellular energy metabolism.

The brain is highly energy-demanding, using a large share of the body's oxygen and energy. Because of this, nutrients that support mitochondrial function and oxidative balance are of scientific interest for cognitive wellness.

Ubiquinone and Brain Energy

Mitochondria are often described as the “energy centers” of cells. Ubiquinone helps transfer electrons in the mitochondrial electron transport chain, a process required for producing ATP, the body's main cellular energy molecule.

Because healthy brain function depends on steady energy availability, researchers have studied CoQ10 for its role in supporting normal mitochondrial function, oxidative balance, and healthy aging of brain tissue. Reviews describe CoQ10 as important for mitochondrial ATP production and antioxidant defense, while noting that human cognitive outcomes remain mixed and need further study.

Cognitive Wellness and Healthy Aging

Scientific interest in CoQ10 and cognition is based on three main ideas:

1. The brain requires high energy output.
2. Mitochondrial efficiency may influence healthy brain aging.
3. Oxidative stress is one factor involved in age-related changes in cellular function.

A recent review concluded that animal studies show promise for CoQ10 in supporting brain mitochondrial function and reducing oxidative stress, but human clinical trials have produced mixed results. This means ubiquinone is best described as a supportive cognitive-wellness ingredient, not as a proven treatment for memory loss or any neurological condition.

Antioxidant Support

CoQ10 also helps support antioxidant defenses. In the body, CoQ10 can help protect cell membranes from oxidative stress generated during normal metabolism.

This antioxidant role is relevant to cognitive wellness because brain tissue is rich in fats and has high oxygen use, making oxidative balance an important part of maintaining normal brain function over time.

Bioavailability and Formulation Considerations

CoQ10 is fat-soluble, meaning it is generally absorbed better when consumed with dietary fat. Bioavailability can vary depending on the form, dose, and formulation.

Ubiquinone has a long history of use in supplements, and the body can convert it to ubiquinol as needed. However, individual responses may vary, and no supplement should be viewed as a substitute for sleep, exercise, balanced nutrition, medical care, or healthy lifestyle practices.

Ubiquinone in ActivPower COGNEX™

ActivPower includes ubiquinone powder in **COGNEX™** because of its well-established role in cellular energy metabolism and its scientific relevance to cognitive wellness.

COGNEX™ is designed to support:

- Cellular energy production
- Mitochondrial function
- Oxidative balance
- Cognitive wellness
- Everyday mental vitality

These are general wellness and structure/function concepts. They do not imply that COGNEX™ diagnoses, treats, cures, mitigates, or prevents cognitive decline, dementia, neurological disease, or any medical condition.

Safety and Responsible Use

CoQ10 is generally well tolerated in healthy adults, but it may not be appropriate for everyone. Individuals who are pregnant, nursing, taking medications, using blood thinners, managing chronic medical conditions, or preparing for surgery should consult a qualified healthcare professional before using products containing CoQ10.

Key Takeaway

Ubiquinone is a naturally occurring form of CoQ10 that supports mitochondrial energy production and antioxidant balance. These roles make it a scientifically reasonable ingredient for cognitive wellness formulations.

Current research supports CoQ10's biological importance in cellular energy and oxidative balance, while human cognition studies remain mixed. For this reason, ActivPower presents ubiquinone as a supportive wellness ingredient within COGNEX™, not as a treatment for any disease or medical condition.

Scientific References

1. Mantle D, Dybring A. *Coenzyme Q10 and Cognition: A Review*. *Nutrients*. 2025;17(17):2896. This review summarizes animal and human research on CoQ10 and cognition, noting strong biological rationale but mixed human clinical findings.
2. Mantle D, Hargreaves I. *Coenzyme Q10 Supplementation in Ageing and Disease*. *Subcellular Biochemistry*. 2021. This review discusses CoQ10 biosynthesis, mitochondrial function, aging, deficiency states, and clinical supplementation research.
3. Macunluoglu B, et al. *CoQ10 and Cognition: A Review and Study Protocol for a 90-Day Randomized Controlled Trial in Healthy Elderly Adults*. *Frontiers in Aging Neuroscience*. 2019;11:103. This paper describes the rationale and design for studying ubiquinol supplementation and cognitive outcomes in healthy older adults.
4. Mohamed DI, et al. *Coenzyme Q10: A Mitochondrial Restorer for Various Brain Disorders*. *Naunyn-Schmiedeberg's Archives of Pharmacology*. 2022;395:21–31. This review describes CoQ10 as an electron carrier in the mitochondrial electron transport chain and an antioxidant compound.

5. Siciliano G, et al. *Coenzyme Q10 and the Blood-Brain Barrier: An Overview*. 2025. This review discusses CoQ10, mitochondrial function, oxidative stress, and challenges related to delivery into brain tissue.
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Educational Disclaimer

Educational Information Only

The information presented in this article is provided solely for educational and informational purposes and reflects selected scientific literature concerning ubiquinone, also known as coenzyme Q10, and its naturally occurring role in cellular energy metabolism, oxidative balance, and cognitive wellness.

The statements contained herein have not been evaluated by the U.S. Food and Drug Administration (FDA) or other regulatory authorities. ActivPower products are not intended to diagnose, treat, cure, mitigate, or prevent any disease, disorder, cognitive impairment, neurological condition, or medical condition in humans or animals.

References to scientific studies are provided for educational purposes only and do not imply that identical results will occur in every individual. Scientific understanding of ubiquinone and CoQ10 continues to evolve, and some findings remain preliminary or require further clinical validation.

Consumers should consult a qualified healthcare professional before using any dietary or nutritional supplement.

This article is intended solely as an educational summary of current scientific literature regarding ubiquinone consumption in humans. No other claim is stated or implied.