PRODUCT INFORMATION

BioPQQ™

Ideal food supplement for maintaining healthy energy levels and protecting against burnout in women and men. Encourages the optimal efficiency of the mitochondria and promotes antioxidative capacities.

Basic Facts

Pyrroloquinoline quinone (abbreviated PQQ) was first discovered by the Norwegian biochemist Jens G. Hauge in 1964 and recognized as an important cofactor in metabolic processes in bacteria. In 1967, microbiologists C. Anthony and L. J. Zatman recognised that this previously unknown factor was also significant in relation to the breakdown of alcohol; this is why they named the substance methoxatin. Approximately 15 years later, the biologist S. A. Salisbury and his colleagues were successful in isolating this substance from certain microorganisms and determining its exact chemical structure. However, it was not until 2003 that Japanese brain researcher Tadafumi Kato's team discovered that PQQ also occurs in rodents and other mammals, including humans.

PQQ is an important redox cofactor that can be classified as a new B-vitamin, along the lines of niacin or riboflavin. The main function of this new vitamin is to help regulate the metabolism of the amino acid lysine.

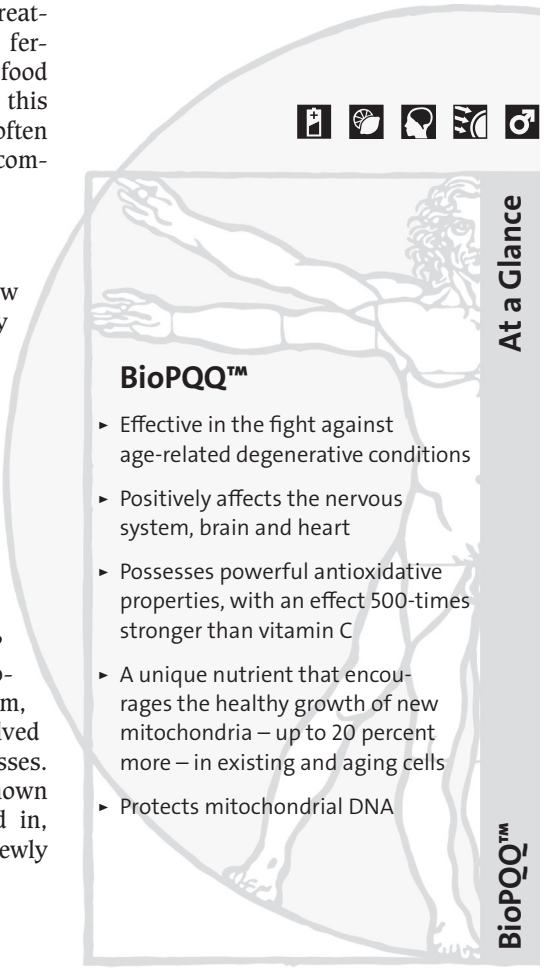
Although the official classification of PQQ as a vitamin had long been in question, today scientists agree that it is indeed an essential vitamin. Thus, in 2003, 55 years after the discovery of the last vitamin, vitamin B12, in 1948, this new substance was added to the vitamin family.

PQQ's status as a true vitamin has been proven based on both its structural similarity to vitamin B2 and vitamin B3 and the fact that PQQ cannot be independently formed by most organisms and must instead be obtained from the diet. Its location in the mitochondria of the cells promotes the formation of new cellular power sources. Because PQQ is located specifically where free radicals are formed in the mitochondria, it is able to intercept them. Furthermore, it encourages the activation of important mitochondrial repair mechanisms. It possesses powerful antioxidant properties and is much more resistant than vitamin C, promoting overall health. For example, in cases of unhealthy blood sugar levels, PQQ is capable of maintaining healthy insulin sensitivity. Furthermore, it helps to protect the cells of the heart and brain. Additionally, PQQ's ability to support mitochondrial health may help protect against unhealthy cell growth.

The main sources of this water-soluble vitamin include fruits like papaya and kiwi, but also various teas, green vegetables, milk (particularly breast milk) and certain meat products. However, the greatest amounts of PQQ can be found in fermented soy; the traditional Japanese food natto. Because the concentration of this vitamin in various food products is often too low, supplementing with PQQ is recommended.

Effects

To this day, the mystery of exactly how PQQ works has not been completely solved. What is certain, however, is that PQQ is a significant cofactor in various reduction and oxidation reactions. Thereby, it can be proven that this substance, like the NAD/NADH system, can absorb electrons and subsequently release them. The energy released by the reconversion of PQQ-H2 into PQQ, aided by the respiratory chain enzyme, can be used to form energy-carrying ATP from ADP, particularly within the mitochondria. In addition to this mechanism, scientists assume that PQQ is involved in more than 20,000 catalytic processes. If you compare this with the four known processes that vitamin C is involved in, the potential importance of this newly discovered vitamin is quite evident. Independent of these known mechanisms, PQQ was found to influence specific regions on certain genes, appearing to help regulate related gene expressions. Not only was this property described for genes in the mitochondria, but also for genes located in the cellular cores of tissues such as neurons. Based on the biochemical molecular structure of PQQ, it can be assumed that this vitamin is also capable of protecting against free radicals, regardless of whether these are formed due to oxidative or nitrosative stress.



Uses

The majority of scientists that deal with the topic intensively agree that PQQ possesses a variety of potentials that could be useful in the field of preventative and anti-aging medicine. Specifically, the effects of PQQ on mitochondrial function imply that it may help counterace the known effects of mitochondrial dysfunction. Not only does PQQ encourage healthy functioning of the mitochondria that are already present, but it is also capable of promoting neogenesis, helping to increase the number of intracellular mitochondria within various tissues. At the same time, the antioxidative properties of PQQ, along with all related consequences, have been proven. These include an improved ability to regenerate tissue exhibiting pre-existing damage and preventative protection against tissue-specific toxins. If you combine these properties with the fact that PQQ may also protect against the formation of B-amyloid (Alzheimer's), a-synuclein (Parkinson's) and the auto-oxidation of the DJ1-gene (Parkinson's), it is evident that this vitamin holds great significance within the field of neuroprotection.

Similar benefits of PQQ have also been described in relation to the cardiovascular, metabolic and reproductive systems.

Even though PQQ was discovered just a short while ago, it is undisputed that this vitamin is involved in a variety of physiological processes. Building upon the initial data regarding supplementation with PQQ, it can be assumed that even more health-promoting properties of this vitamin will be discovered in the future. On one hand, this should be an incentive for further studies; on the other hand, it justifies PQQ's use now, particularly in cases where PQQ has been proven to render positive results.

Composition

One capsule contains 10 mg BioPQQ™ Pyrroloquinoline Quinone Disodium Salt in pharmaceutical grade.

Other ingredients: rice flour, magnesium stearate, SiO_2.

Dosage

In normal cases take 1 capsule in the morning with plenty of fluid. If required, the dosage can be increased to 2 capsules.

Instructions

Food supplements are no substitute for a well-balanced diet and a healthy lifestyle. The indicated recommended daily intake should not be exceeded. Persons under constant medical care should consult a physician before taking the supplements. Product information is not to be considered a statement regarding cure; in general, we advise against self-medication without proper consultation of a doctor. Subject to mistakes and print or typographical errors.

Store in a cool and dry environment, out of reach for children.

BioPQQ™ Product Groups

BioPQQ™ can be found in the following product groups (www.vitabasix.com):

- **Power & Energy**
- **Brain & Memory**
- **Immune System, Cell Protection & Antioxidants**
- **Men's Health**
- **Vitamins & Food Supplements**

Manufacturer:

VitaBasix®

by LHP Inc.

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Important information:

Our products are manufactured in accordance with the GMP (Good Manufacturing Practice) standard. Their quality, purity and concentration are regularly tested in independent test laboratories, in keeping with the FDA (Food and Drug Administration) guidelines.

Our products should be regarded as preventive measures or measures to enhance the individual's general wellbeing. Patients must consult a doctor before using the products for the treatment of diseases.

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