

Mitochron®

Chronobiological dietary supplement to compensate for a lack of energy and protect against burnout in men and women. Improves energy performance and boosts mitochondrial function in the individual cells while at the same time providing enhanced protection against oxidative damage.

Basic Facts

The body does not produce the energy needed for all its functions in some special power organ, but in almost every single one of our roughly 70 billion cells. The so-called mitochondria in our cells are the key element with regard to the generation of the body's life force. These mini power plants are often less numerous, smaller and less efficient in people with chronic diseases.

Whether there is a correlation between the number, size and performance of mitochondria and the chronic exhaustion of millions of young people and adults has not been definitively explored but is probable. Weakness may be caused by a lack of sleep, poor nutrition, physical and mental overload, as well as medical treatments and procedures. According to investigations carried out by the British Royal College of Psychiatrists, one in five adults sometimes feels burned out and every tenth feels permanently exhausted. Women are affected more often than men. Burnout has slowly become a buzz word in our society – one that has long not been limited to one's working life. The phenomenon involves an inner exhaustion of human vitality. The term was coined in 1974 to describe a syndrome that often occurred in staff in the caring professions.

Burnout develops in several phases: success, greater willingness to prove oneself, neglect of one's needs, being hard on oneself. In the end, however, the ability of the psyche and the body to perform fails.

The intake of particularly energy-rich molecules, along with amino acids, enzymes and vitamins, at the right time of the day increases the performance potential of the mitochondria. This support of the processes that occur in the cell can mitigate the negative effects of the lack of energy in any form.

The main task of these mini power plants is the production of energy through chemical reactions in the food chain, in which fatty acids and glucose are converted into a usable and transportable form of energy, ATP for short.

The raw material to produce ATP is derived from one's diet or from the catabolism of available tissue, such as adipose tissue.

Food that has been consumed must first be broken down into simpler molecules such as carbohydrates, proteins and fat prior to being processed. While these components oxidize in the cell with the aggressive oxygen from the air we breathe, the mitochondria provide energy in the form of ATP molecules. These highly reactive processes are repeated extremely rapidly. The total amount of ATP produced during the day often exceeds the body weight of the person concerned. During abnormal conditions such as fever, the effects of a disease, stroke or other stress loads, more oxygen is often used than is used for the production of ATP. As a result, highly aggressive radicals are produced in greater quantities, which is why a lack of energy is usually accompanied by a threatening increase in oxidative stress. The so-called biogenesis of mitochondria, i.e. their increased formation, embodies a particularly important protective function. The formation of mini cellular power plants is governed by the respective genome and favored by various components, including certain phytochemicals and other special biochemical compounds. The mini cellular power plants are also essential in the production of certain blood components, in the production of vital hormones such as estrogen and testosterone, in the metabolism of brain neurotransmitters and when dealing with fat molecules in food.

Once a mitochondrion is no longer fully functional, the affected cell is subject to multiple loads. The feeling of burnout affects the performance of various organs, but predominates above all in the brain.

Effects

With regard to any medically-assisted improvement in energy, one has to consider primarily the controlled supply of the **co-enzyme NADH**, a key molecule in the production of ATP. Recent scientific advances make it possible to stabilize the effectiveness of NADH and to achieve a high level of bioavailability after oral administration. The recommended intake time is the morning, supplemented by the morning vitamins of B6, C and E which act as free radical scavengers. Also, anyone affected by lethargy is recommended to take, in the first half of the day, nutri-



tional supplements based on natural substances that contribute to energy generation. This is done either by improving fat utilization or by supporting oxidation as a kind of fuel. In such cases, the amino acids of L-carnitine and L-arginine have proven themselves in various studies.

BioPQQ™ pyrroloquinoline quinone disodium salt: The significance of Bio-PQQ™ (also known as pyrroloquinoline quinone) for the human body wasn't discovered until 2003. This vitamin is involved in more than 20,000 physiological processes and therefore plays an immensely important role in the prevention of many diseases. In addition to the positive effects it has on the general metabolism, muscle function, neuronal conduction and the immune system, it also enhances many effects of the other vitamins.

L-carnitine helps certain substances required for energy production to enter into the mitochondria.

L-arginine improves the body's production of the growth hormone HGH, which manifests itself in the formation of new muscle mass. This amino acid can weaken the effect of harmful substances on the liver, e.g. environmental toxins, and has positive effects on male fertility. From a chronobiological point of view, these measures are best undertaken at the start of the day. The boost in energy generation increases the risks associated with oxidation. A weakened body is exposed to them even more. During the regeneration phase at night, therefore, the main focus is on protecting the organism against free radicals.

Fatty acids of the **omega-3 group** are particularly effective neutralizers of such aggressive oxidizing substances. Since they are unstable chemical compounds, they are in turn protected against damage by phytochemicals such as **ginkgo biloba** and the main active ingredients of red wine medicine, **resveratrol** and **quercetin**. In addition, quercetin and other plant compounds can activate neogenesis, i.e. the formation of new mitochondria.

Co-enzyme Q10 also plays an important role in generating sufficient energy, as well as protecting mitochondria from harmful influences. Recent developments also facilitate a noticeable increase in the otherwise rather low bioavailability of this key enzyme.

The bioactivity of the evening substances is increased by vitamins B1, B2 and B12 being administered at the right time of day.

Composition

AM capsule (morning)

	Per capsule/daily dose	
BioPQQ™ Pyrroloquinoline quinone disodium salt	1 mg	2 mg
NADH® (Panmol)	5 mg	10 mg
L-carnitine	100 mg	200 mg
L-arginine HCl	50 mg	100 mg
Vitamin C	75 mg	150 mg
Vitamin E	17,5 mg	35 mg
Vitamin B6	5 mg	10 mg
Omega 3 complex (containing EPA 9 mg, DHA 6 mg)	15 mg	30 mg

in pharmaceutical grade. Other ingredients: microcrystalline cellulose, magnesium stearate.

PM capsule (evening)

	Per capsule/daily dose	
BioPQQ™ Pyrroloquinoline quinone disodium salt	1 mg	2 mg
Co-enzyme Q10	100 mg	200 mg
Glutathione	25 mg	50 mg
Quercetin extract	25 mg	50 mg
Resveratrol	50 mg	100 mg
Ginkgo biloba extract	60 mg	120 mg
Zinc (Zn)	7,5 mg	15 mg
Biotin	250 mcg	500 mcg
Vitamin B1	1 mg	2 mg
Vitamin B2	7,5 mg	15 mg
Vitamin B12	5 mcg	10 mcg
Omega 3 complex (containing EPA 13,5 mg, DHA 9 mg)	22,5 mg	45 mg

in pharmaceutical grade. Other ingredients: rice flour, magnesium stearate.

Dosage

In normal cases take 2 capsules AM (yellow) in the morning and 2 capsules PM (blue) in the evening with plenty of fluid.

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.

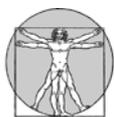
Store in a cool and dry environment, out of reach for children.

Mitochron® Product Groups

Mitochron® can be found in the following product groups (www.vitabasix.com):

-  Power & Energy
-  Chronobiology
-  Depression & Moods

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.

Subject to alterations and printing errors. Version: May 2020