

The personalized
 **SALUSMED**[®]
Micro Nutrients

Nutrient Lexicon

Acacia Gum

This substance, also called "Gum Arabic", has a positive effect on your intestine by mobilising the immune system. The natural microorganisms of your intestine process Acacia gum into short-chain fatty acids which build up the mucous membrane of your intestine. The risk of falling victim to cancer of the colon is reduced.

L-arginine

The amino acid L-arginine is very important for bone and lipid metabolism. Blood pressure and cholesterol values can be reduced by L-arginine and plaque formation in the blood prevented. Wound healing is improved, while the immune system and libido can also benefit.

Bioflavonoids, citrus bioflavonoids

Flavonoids have extremely diverse effects on the organism. They have a beneficial influence on the blood circulation and cardiac activity, protect against irradiation, have a bacteriostatic and antihistamine effect, reduce lactate levels and improve the iodine balance. They lower body temperature and have an anti-inflammatory effect. The effectiveness and bioavailability of vitamin C is increased enormously by flavonoids.

Biotin (vitamin H/B₇)

Healthy skin, hair and nails are the result if sufficient biotin is available to the metabolism. Biotin synthesises and degrades fatty acids as an enzyme and also regulates cholesterol metabolism. Carbohydrate and protein metabolism as well as the regulation of blood sugar levels also depend on an optimum biotin supply.

Calcium

Calcium is essential for building up and maintaining bones and teeth as well as the collagenous fibres. Calcium ensures the right muscle tone and a regular heartbeat and is involved in transmitting nerve impulses. It is believed to be responsible for speeding up wound healing.

L-carnitine

L-carnitine is important for organs with a high rate of metabolism (muscles, heart, liver, kidneys): It serves as a transport molecule for fatty acids which are burned in the mitochondria. L-carnitine also boosts the immune system and has a performance-enhancing effect in general – fatigue and exhaustion are combated.

L-carnosine

This substance could be referred to as a classic "anti-aging amino acid". A high natural concentration is present in the skeleton and heart muscles, the brain and lens of the eye. Carnosine has a positive effect with degenerative diseases (heart, bones, joints, connective tissue, eyes).

Carotenoids (β -carotene = provitamin A/lutein/lycopene)

These are classified as secondary active plant agents and have a strong antioxidative effect as "radical scavengers". Besides β -carotene, which is often used as a food colorant, lycopene will also be familiar to everyone: it is the red colouring in tomatoes.

Choline

Choline supports the enzyme system of your liver and hence helps with detoxification of the blood. Choline also plays a role in transporting triglycerides and fats from the liver to the tissues – an accumulation of this substance in the liver results in failure of this essential organ.

Choline is converted to acetylcholine in the brain and nerves, a main neurotransmitter which controls behaviour and emotions in the brain. You can boost your memory by taking choline and lecithin (lecithin = choline, combined with inositol).

Chondroitin sulphate

Cartilage contains many different substances as a protective gliding plane between the bones. It consists of cells and a matrix which is produced by the cartilage cells. Chondroitin sulphate is one of the main components of the cartilage matrix. This substance inhibits the activity of cartilage-degrading proteins (enzymes). Taking chondroitin sulphate promotes the production of cartilage matrix and makes the cartilage more resistant. Chondroitin sulphate is a natural product and is extracted from animals.

Chrome

Chrome is a trace element which stimulates the enzyme of fatty acid degradation and carbohydrate metabolism. It is also believed that there is a link between chrome and healthy blood vessels. The functionality of callus and the lens of the eye is affected by chrome.

Citrus bioflavonoids See under "Bioflavonoids".

Coenzyme Q₁₀ (ubiquinone)

Every functioning cell in the body needs energy. The task of coenzyme Q₁₀, which is produced in the liver, is to supply all cells with energy. A whole 95% of the entire body energy is metabolised via Q₁₀ acting as a catalyst. As increasing age, regular alcohol consumption and a course of medicine reduce the body's own production of Q₁₀, it is advisable to take Q₁₀ externally in these cases or supplement it as a preventative measure after the age of 40.

Amongst other things, Q₁₀ is necessary for normal functioning, as it minimises the degree of permanent damage during heart attacks and increases the resistance of the heart tissue.

Copper

Copper is a component of many enzymes which provide protection against free radicals. It is very important for our metabolism as it is involved in building up bones and connective tissue. Copper is also required for absorbing iron from food.

Creatine monohydrate

This increases the performance of muscle, brain and nerve cells. More energy can be provided with creatine: endurance and competitive athletes should always take it with BCAAs, magnesium and lots of water. Creatine prevents ketose formation with diabetics and competitive athletes, which results when generating energy from body proteins. The body regenerates faster after a physical feat.

L-cysteine

L-cysteine is a non-essential amino acid with antioxidative properties. It helps strengthen connective tissue, speeds up healing processes and assists in detoxification processes.

Folic acid (vitamin B₉)

Folic acid is required during cell division and plays a crucial role in the development and functioning of the nervous system. It helps ensure good sperm quality in men. The production of antibodies as well as hair and nail growth benefit from folic acid.

Garcinia Gambogia (hydroxycitric acid)

This substance slows fatty acid biosynthesis and also has the effect of reducing appetite. It is primarily used in diets for losing weight.

Glucosamine sulphate

Glucosamine is a naturally occurring amino sugar which is present in high concentrations in the joints. It is derived from natural sources (shells of marine animals). Glucosamine sulphate is on a par with the anti-inflammatory NSAR (non-steroidal anti-rheumatic agents) as a "symptom modifying drug" and even superior to it in terms of the length of effectiveness.

There is also evidence of delayed chondroporosis. A radiologically measurable reduction in knee joint narrowing could also be demonstrated with glucosamine sulphate.

L-glutamine

This amino acid keeps your mind fit. It not only improves the memory but also concentration. At the same time, it is also responsible for detoxification processes in the brain. It represents a further support for the immune system.

Glutamine also protects both the stomach and intestine and provides energy essential for nerve cells.

L-glutathione

Glutathione serves as a transport molecule for cells, bringing amino acids into the cell. The importance of this substance can be seen in the fact that all cells use reduced glutathione. It serves as a guiding molecule in cell division and for all repair genes. Glutathione protects against radiation and is important for the immune system – it is able to regenerate vitamin C and E. Glutathione protects and builds up the intestinal mucous membrane, boosts liver metabolism and supports cell detoxification.

L-glycine

This is important for healthy connective tissue and helps the liver with detoxification. Glycine is indispensable for the body's own production of creatine.

Green tea extract

Green tea extract contains a series of polyphenol compounds which have a powerful antioxidative effect. This is beneficial above all for the cardiovascular system as it helps prevent arteriosclerosis and reduces blood pressure. This relieves the body's own antioxidative system.

Guar

Guar forms, as it were, the core of the HCK-micro nutrients. "HCK" stands for "Hydro Cell Key". This "key" function is assumed by guar, which is readily able to swell up as coldwater-soluble, purely vegetable roughage. It is extracted from the seeds of the Indian cluster bean. The special highly-cleaned pharmaceutical quality of Guar, which serves as a natural matrix, involves embedding the micro nutrients using an internationally patented process. After taking the HCK micro nutrients, these swell up in the stomach / intestinal tract and form large, gel-like surfaces, in which the vital substances and nutrients are kept in a state ready to be supplied to the body for several hours. The HCK micro nutrients form a so-called "colloidal system" when swollen.

The colloidal state is a specific property of all biological substances, in other words all natural foods (fruit, vegetables and wheat). It enables the human body to absorb, digest and utilise micronutrients optimally.

L-5-HTP

L-5-HTP is the plant equivalent of the amino acid L-tryptophan. This substance has the same properties as normal L-tryptophan – only it has the advantage that it can penetrate the blood-brain barrier and hence take effect more rapidly and efficiently. L-5-HTP is extracted from the seeds of the East African plant *Griffonia simplicifolia* (black bean).

Inositol

Like choline, this is involved in degradation of the cell membrane. Inositol also serves as a signal substance when transmitting control commands to the cell. A tendency towards eczema often occurs in conjunction with an inositol insufficiency. Inositol is important for the growth and health of hair.

Iodine

Iodine is required for the formation of thyroid hormones (thyroxin). These hormones influence the entire energy conversion of the body. This includes regulation of body temperature amongst other things. The growth and development of organs is also regulated by the thyroid hormones.

Iron

Iron is a component of many enzymes and is involved in the formation of haemoglobin in red blood cells, which is essential for transporting oxygen in the blood. It is responsible for both respiration and growth. Chronic fatigue can be caused by a lack of iron.

Isoflavones

Isoflavones are also known as phyto-oestrogens, because they have a similar effect to oestrogen. In contrast to the "real" oestrogen, isoflavones are found principally in bones and blood vessels. Phyto-oestrogens have positive effects on hormone and bone metabolism and the lipid profile. They are used in the prevention of cancer and cardiovascular illnesses.

L-isoleucine

Without the amino acid isoleucine, the other amino acids are utilised more sluggishly, muscles are degraded and lack of motivation sets in. This amino acid ensures production of definite messenger substances in the brain which enable greater resistance to stress.

L-leucine

Without leucine there would be no muscles. Leucine stimulates protein synthesis so that muscles can be formed. This amino acid is also responsible for stability of the blood sugar level. In this way, the brain is always steadily supplied with sugar, which it needs for thinking.

α -lipoic acid

Alpha-lipoic acid has quite an extraordinary ability: it can regenerate other antioxidants (vitamin C, E, coenzyme Q₁₀, glutathione). The major advantage therefore lies in maintaining the antioxidative capacity of each individual one of these substances, which enables our immune system to protect us more effectively.

As a coenzyme, alpha-lipoic acid affects the mitochondria of the cells and hence promotes energy production. It is also of central importance for fat, carbohydrate and energy metabolism.

Lutein

Lutein, which belongs to the carotenoids, primarily has an influence on the water balance and functions of the cell walls. In the retina of the eye, a large amount of lutein is normally present in the macula. At this point of most acute vision, degenerative processes (macula degeneration) can result at advanced ages, which can lead to loss of sight. The effect of light and oxygen over many decades is believed to be responsible for this. As lutein acts like a filter at this point, it is able to protect the macula against harmful influences. Lutein can also degrade free radicals in the area of the eyes.

Lycopene

As a much more powerful radical scavenger than other carotenoids, lycopene represents a highly effective antioxidant. According to recent studies, it plays a role in preventing various cancers, above all those of the intestinal tract, as well as cardiovascular diseases. Lycopene can also enable a moderate reduction in the cholesterol level. In addition to this, lycopene improves intracellular communication and has a positive effect on cell growth.

L-lysine

Lysine is used for treating herpes infections. A lack of lysine can adversely affect the formation of muscle and connective tissue. It promotes the synthesis of carnitine, boosts the storage of calcium and is therefore recommended for osteoporosis.

Magnesium

This mineral essential for fat, protein and carbohydrate metabolism functions as an activator for around 300 enzymes. Magnesium improves the performance of the heart muscle, expands the coronary vessel and stabilises the blood platelets. As magnesium is also an anticoagulant and reduces blood fat levels, it plays a role in preventing heart attacks. Irritability and aggressiveness are reduced by magnesium and stress reactions can also be mitigated. Nerves, muscles and bones need magnesium.

Manganese

The trace element manganese plays an important role in the formation of many enzymes and is involved in the metabolism of carbohydrates and lipids. The body needs manganese for normal bone growth and cartilage formation. The production of sex hormones is also supported by manganese.

L-methionine

This amino acid essential for humans reduces histamines, lending it an anti-allergic effect. It speeds up wound healing processes and tissue formation. L-methionine is used to boost anabolism in athletes and people suffering from liver diseases. The body requires increased levels of methionine in the case of alcoholism as well as long-term, regular courses of paracetamol.

Methyl-sulphonyl-methane MSM

MSM is a naturally occurring organic sulphur which becomes less concentrated in joints at advanced ages. MSM has to be administered in conjunction with chondro-protective (cartilage-protecting) therapy, preferably being added to arthrosis products.

Molybdenum

Molybdenum is a component of many enzymes, predominantly those which carry out detoxification functions. In addition to this, it has a positive effect on fertility in both men and women.

L-ornitine

Ornitine functions in muscles, helping to build them up together with L-arginine by triggering the release of HGH (growth hormone). It protects the liver and activates lipid metabolism. Ornitine also reduces the amount of fat in the body by increasing muscle mass.

PABA

Para-aminobenzoic acid (PABA) is a natural, water-soluble cofactor in vitamins of the B group. It is an antioxidant which protects the body against solar radiation, helping to prevent skin cancer. PABA keeps the skin soft and supple and helps burn wounds to heal faster.

Pantothenic acid (Vitamin B5)

Pantothenic acid plays a very diverse role and is involved in the entire metabolism. As a component of coenzyme A, it takes part in over 100 metabolic reactions, including the formation and degradation of carbohydrates. Pantothenic acid is responsible for healthy skin and tissue, assists the nervous system in its functional processes, controls blood circulation, protects mucous membranes and helps hair growth amongst other things.

L-phenylalanine

The body forms its "happiness" hormones, typically noradrenalin or endorphins, from this amino acid. It combats depression at the same time. Phenylalanine is also responsible for triggering the feeling of fullness in the brain after eating.

Potassium

Potassium regulates the blood pressure and heartbeat and is responsible for the stimulatory ability of muscles and nerves. It is also essential for transmitting nerve impulses.

L-proline

Proline serves to break down accretions in blood vessels, thus helping to prevent heart attacks and strokes. Proline also stabilises tendons, bones and joints, while also boosting the performance of muscles if there is not enough glucose in the body.

Quercetin

Other bioflavonoids can be formed with the help of this bioflavonoid. It represents the best researched agent of this group and functions as a plant hormone (more accurately: phyto-oestrogen). Its numerous benefits include antihistaminic effects, in other words it displays anti-allergic and anti-inflammatory properties. Quercetin is also a powerful antioxidant and works towards preventing thromboses. Quercetin protects "Poor" LDL cholesterol against oxidation and inhibits the growth of prostate cancer cells.

Red wine extract

Red wine extract is a highly effective substance consisting of antioxidative flavonoids (see bioflavonoids) with the well-known effect of red wine: it counters anti-sclerotic developments and is therefore beneficial to the cardiovascular system.

Selenium

This vital trace element assists in the detoxification functions of your body, thus helping your body's own immune system. Selenium boosts the effect of vitamin E and works towards eliminating free radicals as a component of the essential enzyme glutathione peroxidase.

Silicon

Silicon, like calcium, is an important material for building up bones, cartilage, tissue, hair and nails. The mineralisation process in bones is influenced by the presence of silicon. Silicon increases the number of defence cells, stabilises the lung tissue and has an anti-inflammatory effect. In addition, silicon also lowers the bioavailability of aluminium, which is of interest for people with aluminium surpluses.

Silymarin

Silymarin has an anti-inflammatory effect and helps to protect the liver against toxins, drugs and the degradation products of alcohol. It stabilises the cells and therefore minimises allergic symptoms. As with many other plant extracts, silymarin works as an antioxidant, subsequently protecting against the effects of higher levels of free radicals.

Silymarin not only works towards the generation of new liver cells but also improves the regenerative effect of this organ.

Taurine

A component of bile acid, taurine has an important function in the metabolism. The formation of bile acid represents the most significant way of expelling cholesterol. Taurine is a good antioxidant and protects the cells from oxidative damage. Taurine has a positive regulatory effect on the function of the heart, as well as having anti-arrhythmic and blood pressure reducing properties.

L-threonine

A sufficiently high level of threonine is responsible for good blood circulation in the body. This amino acid expands the blood vessels and ensures that enough blood flows from your brain to your big toe. It supports T-lymphocyte production and is helpful for nerve/muscle relaxation. L-threonine is utilised for energy production during strenuous activity (sport).

L-tryptophan

Sleep disorders? If so, you probably have a tryptophan deficiency. This is because the body is only able to form the hormone serotonin with a sufficiently high level of this amino acid. Serotonin is responsible for inner calm and harmony. It is also the "chief among hormones" – as only with sufficient serotonin are you creative, capable and mentally alert. Good success is achieved in combination with magnesium and vitamin B₆.

L-tyrosine

Blood cells can only be formed with this amino acid. At the same time, it is essential for proper functioning of the body's endocrine glands (e.g. the thyroid gland). Tyrosine is used in treating depression on account of its mood-lifting effects. Studies are currently investigating whether the concentration-boosting effects of this amino acid are also useful for treating Alzheimer and dementia patients.

L-valine

Valine is indispensable if "nerves of steel" are needed. At the same time, it helps the immune system and is important for muscle formation. It usually occurs with L-leucine and L-isoleucine.

Vanadium

The essential trace element vanadium helps various enzymes to function and is required for bone and cell growth.

Vitamin A (retinol)

Good vision, above all in poor light conditions, depends on whether your body has sufficient levels of vitamin A. The old saying "Have you ever seen a hare with glasses?" refers to the substance β -carotene contained in carrots, which can be converted into vitamin A by the body. The further benefits of an optimum vitamin A supply primarily involve protection for the skin and mucous membranes as well as general support for the immune system. Teeth, gums and hair also benefit from this vitamin.

Vitamin B₁ (thiamine)

This vitamin stimulates your appetite and helps keep your mind fresh. Your nerves are strengthened, as is your cardiovascular system.

Vitamin B₂ (riboflavin)

Riboflavin works towards the growth of skin, hair and nails. It also has a positive effect on acuteness of vision, fitness and general growth processes.

Vitamin B₃ (niacin)

Niacin regulates important metabolic functions. It is necessary for energy production and protects the skins and nerve tissues.

Vitamin B₆ (pyridoxine)

Vitamin B₆ is involved in the synthesis and degradation of proteins, as it plays a central role in amino acid metabolism. The formation of messenger substances for the brain depend on it amongst other things. The origin of the red colouring in blood cells and the immune defence system are also influenced positively by vitamin B₆.

Vitamin B₁₂ (cobalamin)

This is responsible for the formation of red blood cells and ensures that you have strong nerves. A good mood, optimism and love of life would be very difficult without vitamin B₁₂. It is also indispensable if you need to concentrate!

Vitamin C (ascorbic acid)

Vitamin C has many functions: above all, it is an antioxidant and, as such, protects cells against free radicals. Vitamin C strengthens the immune system and plays an important role in the synthesis of connective tissue and bones. The entire metabolism, blood vessels, gums, skin, sight and nerves all benefit from this "all-round" vitamin. Mood, sleep and concentration are also influenced positively, and much more.

Vitamin D₃

The most important function of vitamin D₃ involves regulation of calcium and phosphate metabolism. The synthesis and upkeep of bones, cartilage and teeth depend on this vitamin.

Vitamin E NAT (tocopherols)

Natural vitamin E protects your cells with its powerful antioxidative influence and assists cell functions. In addition to the cell membranes, the genetic make-up and blood fats are also protected against attacks by free radicals; it has a prophylactic effect against inflammations and arteriosclerosis. Vitamin E is also involved in the formation of muscles and other tissue.

Zinc

Zinc is both a component and activator of many enzymes and, as such, is essential for hair growth and in forming the structures of the skin. It plays a key role in general growth.

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