

Glutathion *comp*

Highly effective Glutathione complex with the co-factors N-acetylcysteine, Alpha-lipoic acid, Zinc, Selenium as well as Vitamins B1, B2 and B3

Cell active: dissolve – bind – excrete

Dietary Supplement



To support the body's own metabolic pathways for detoxification and cell protection

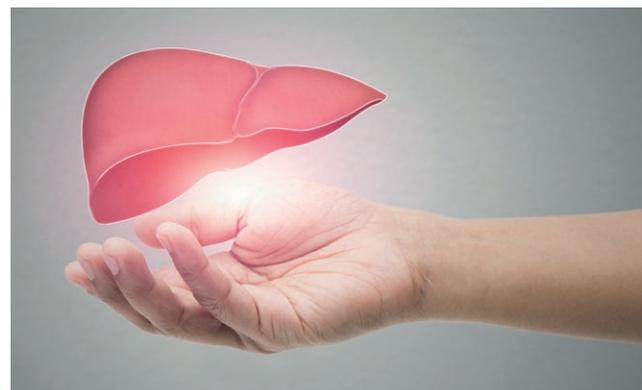
Glutathione is currently one of the most talked about supplements and is now being traded as something of a superfood, as it offers a wide list of benefits ranging from detoxification and preventing oxidative damage to maintaining overall health and protecting the immune system. Glutathione is ubiquitous molecule found in every cell of the body and all organs, especially the eyes, liver, pancreas, but also in the immune system. It is a central molecule for a whole range of physiological processes.

In its reduced form, glutathione, known as glutathione-sulph-hydril or GSH for short, is one of the body's most important antioxidants and is significantly involved in all detoxification processes in the body, especially in the elimination of harmful substances via biotransformation I and II in the liver. Reducing toxin load in the body in turn reduces inflammation. When glutathione is mentioned as a food supplement, the reduced form GSH is usually meant.

Glutathion comp supports:

- the body's own detox metabolism for the elimination of harmful substances via biotransformation I and II in the liver
- the antioxidative cell protection as the body's strongest antioxidant
- the preservation of cellular energy
- the DNA repair and modulates normal cell division
- the protection of the immune system

On the one hand, GSH is absorbed through food – e.g. from raw milk, liver, kidneys or, for vegetarians, from avocados, watermelons, asparagus, potatoes, oranges, tomatoes, broccoli, courgettes, spinach, watercress, almonds, cashew nuts, walnuts and, of course, especially the thiol group suppliers from the leek family, such as chives, garlic and wild garlic. However, it is also produced naturally by the body itself. GSH belongs to the so-called thiols or sulfur-containing molecules due to its sulfur core.





Recommended intake

2 capsules daily with good water.

There are no known restrictions or intolerances. Suitable for vegans. Suitable for ketogenic diet.

Ingredients

Red. Glutathione (GSH) 39 %, N-acetylcysteine, capsule shell: hydroxypropylmethylcellulose, alpha lipoic acid, zinc gluconate, niacin (vitamin B3), potassium citrate, riboflavin-5-phosphate (vitamin B2), thiamine pyrophosphate (vitamin B1), selenomethionine

Nutritional values **Glutathion comp** per 2 capsules (Recommended Daily Amount)

Glutathion reduced	600 mg	---	<ul style="list-style-type: none"> ● Very high proportion of the main ingredients compared to conventional products. Example: Instead of the often usual 100 – 300 mg glutathione, we use 600 mg!
N-acetylcysteine	400 mg	---	
Alpha lipoic acid	100 mg	---	
Zinc	10 mg		100 %
Selenium	110 µg		200 %
Vitamin B 1	2.2 mg		200 %
Vitamin B 2	2.8 mg		200 %
Vitamin B 3	32 mg		200 %

%-Information: NRV: Nutrient reference value

What actually is glutathione?

In organ tissues, it is available both in its reduced form as glutathione sulfhydryl (GSH) and in its oxidized form as disulfide GSSG. Glutathione is biochemically a tripeptide, an organic compound of three amino acids: cysteine, glutamic acid and glycine. For its biosynthesis in the body, however, it needs the aforementioned amino acids and other cofactors, such as certain B vitamins, zinc and selenium.

Glutathione is found in high concentrations in almost all mammalian tissues as well as in plants and is essential for life. It is involved in numerous biochemical processes in the organism. The compound's mode of action has been known since the early 1920s. The best known is the body's own elimination of harmful substances via biotransformation I and II. These are important metabolic pathways in which the dissolution and transformation of fat-bound toxins into their water-soluble, excretable substances takes place. However, glutathione also acts as a regulator of cell division, helps repair damaged DNA, increases the activity of defence cells and acts as a powerful antioxidant and scavenger of free radicals. The highest levels of glutathione are found in the liver, kidneys, pancreas and spleen, as well as in the lenses of the eyes, which are exposed to strong oxidative processes via the light of the sun.

In the case of a glutathione deficiency, chronic exhaustion (fatigue syndrome), chronic tiredness, loss of performance as well as increased susceptibility to infections occur, among other things. Oxidative stress and the depletion of the GSH pool therefore play a key role in human ageing and in almost all degenerative and chronic diseases. Since it strengthens the immune system in addition to DNA repair and cell division, it is conversely helpful in overcoming numerous diseases. Further exciting information about this can be found on the internet or at www.drreinwald.science.

For glutathione formation and glutathione metabolism in the body, protein intake and amino acid metabolism play a decisive role in addition to the provision of sulfur-containing substances such as thiol groups from organic sulfur. For the effective prevention of a glutathione deficiency, we therefore additionally recommend MyAMINO® as well as SulfoCLEAN®, which provides such limiting thiol groups via organic sulfur like MSM and wild garlic.

To support the glutathione metabolism we additionally recommend:



SulfoCLEAN®

Complex of organic sulfur (MSM + wild garlic) and biologically active B vitamins (B12, B6 and folate)



MyAMINO®

The 8 essential amino acids
The Human Amino Acid Profile - Better than any other protein supplement. MyAMINO® is a revolution in protein nutrition

Reasons for a low GSH status

GSH is always used up faster than it is produced by the body or supplied via food when oxidative stress increases extremely in the short term or permanently. Such an increase in oxidative stress can lead to premature ageing and disease through, among other things, depletion of the GSH pool. This GSH depletion is associated with, for example:

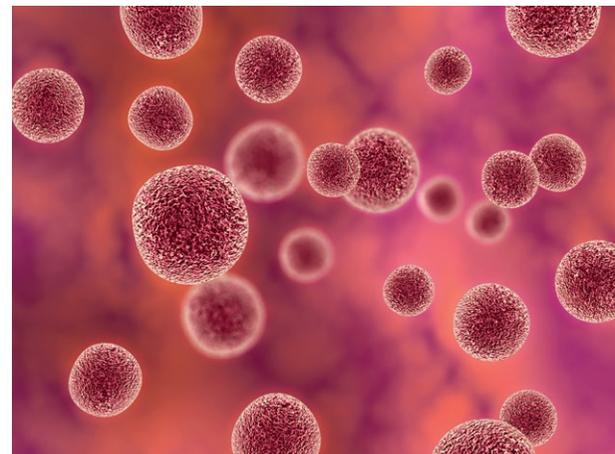
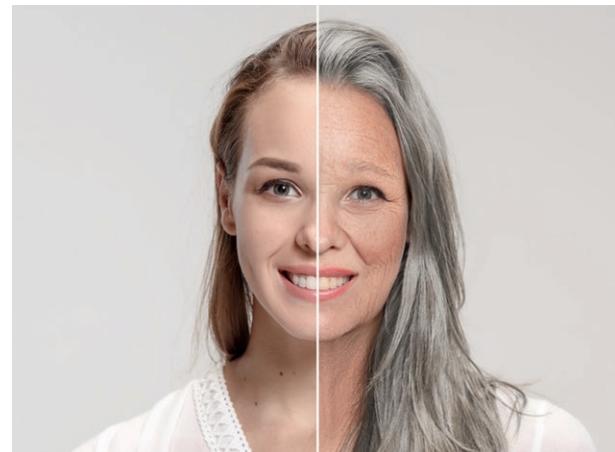
- Environmental loads (pollutants, chemtrails, toxins in vaccinations, UV radiation, nanoplastics, heavy metals, electrosmog from EMF, etc.)
- Acute and chronic diseases
- Constitution
- Lifestyle (poor nutrition, extreme sports, smoking, disco, too much or too little sex, stress at work, stress due to mental trauma, etc.)
- Ageing
- Synthesis inhibition due to the lack of cofactors such as vitamins, sulfur groups, selenium, zinc or vital amino acids (L-cysteine, L-methionine)

Glutathione and anti-ageing

The anti-ageing industry has long since discovered glutathione. Since its concentration in the body cells decreases with age, like many other substances, an increased supply of GSH is considered to have a rejuvenating effect and to refine the skin's appearance. Furthermore, there is an apparent connection between the GSH levels that can be detected in the body and a healthy, longer life expectancy. In a study comparing the glutathione levels (GSH to GSSG) of 41 centenarians aged between 100 and 105 years with those of persons aged between 60 and 79 years, astonishing things were discovered:

- The GSH level in the group of over 100-year-olds was significantly higher than in the younger comparison group
- The glutathione level was again highest in the over 100-year-olds with the best state of health.
- **Result: a high glutathione level is causally related to a high life expectancy.**

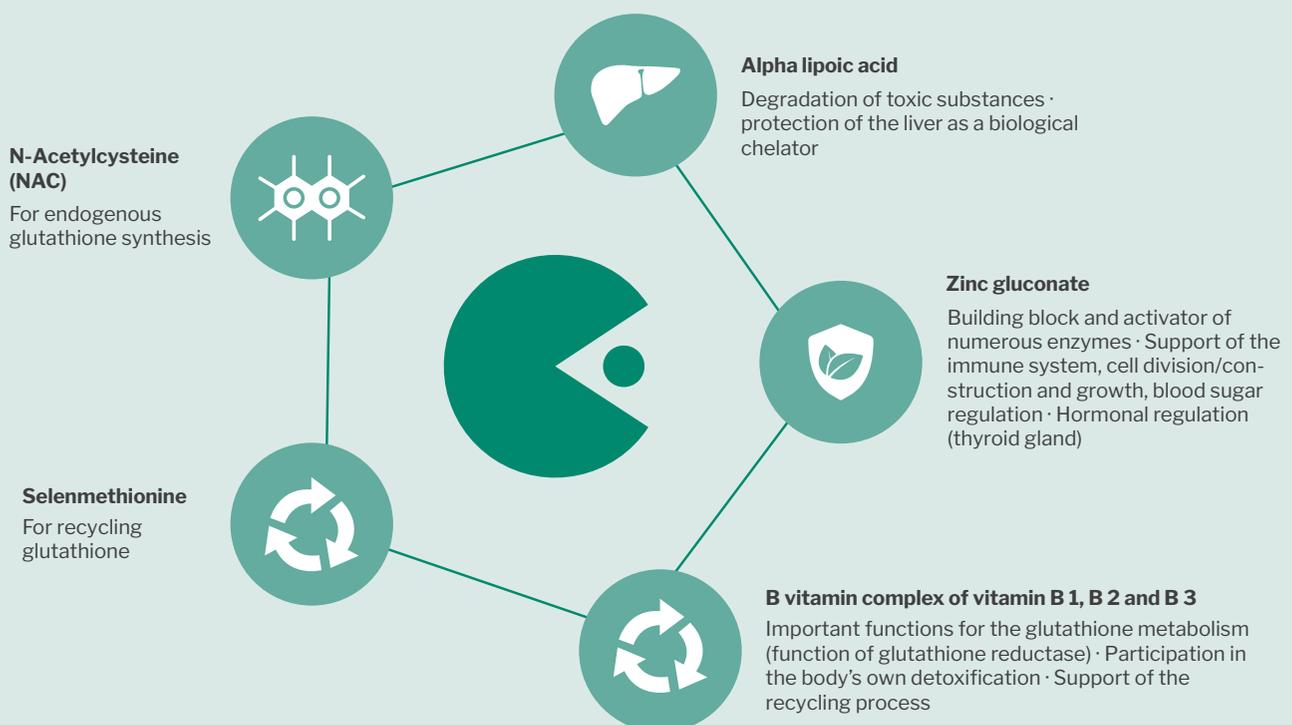
Glutathione levels can be measured either in whole blood or in red blood cells. The ideal ratio of the reduced to the oxidised form, of GSH/GSSG, is 99:1, catastrophic is 1:99. If you want to know exactly, you should have this value determined in the laboratory by a doctor or naturopath.



Glutathione and its cofactors

Another limiting factor for a healthy GSH level are the cofactors involved in reduction (recycling) and resynthesis. The most important of these are integrated into our Glutathion comp – hence the name. In detail, these are the following nutrient components:

- **N-acetylcysteine (NAC)** provides additional L-cysteine as a basic building block for the body's own glutathione synthesis. L-cysteine is often a limiting factor and responsible for synthesis inhibition.
- **Alpha lipoic acid** is a sulfur-containing fatty acid, contributes like GSH to the degradation of toxic substances, thus acts as a biological chelator which protects the liver.
- **Zinc gluconate** is organic zinc. As a trace element, zinc is an important building block and activator of numerous enzymes, such as glutathione peroxidase and glutathione reductase. Zinc is involved in numerous biological processes in the organism. It supports our immune system, cell division and cell growth and is involved in the regulation of blood sugar. Zinc plays a significant role in cell structure, functioning genetic material (DNA repair) and hormonal regulation of the thyroid and reproductive organs. Increased susceptibility to infections can also indicate a zinc deficiency.
- **B vitamin complex of vitamin B1, B2 and B3** · These B vitamins have important functions and are needed for the glutathione metabolism. Especially vitamin B2, which we use in its bioactive form as riboflavin-5-phosphate, is significant for the function of glutathione reductase, which is responsible for the regeneration and new formation of GSH in the body. Recent research points to the involvement of niacin (vitamin B3) in the body's detoxification process. Niacin also plays an important role in the GSH/GSSG system. Niacin is now considered an important cofactor in the reduction of the disulphide GSSG into its reduced form GSH, thus also supporting the recycling process. ^{2/3/4/5}
- **Selenomethionine** · Selenium and methionine play an important role in the formation and recycling of glutathione, i.e. in new synthesis, resynthesis as well as regeneration of GSH from GSSG. Glutathione peroxidase is a selenium-containing enzyme and claims up to 35% of the total selenium in the body.



Dietary absorption and availability of glutathione

An important topic in the oral supply of glutathione in the form of GSH, glutathione precursors or glutathione esters via food or as a food supplement is the discussion of whether reduced glutathione can enter the organism and the cell at all as a whole molecule (tripeptide), since the molecule itself is very reactive and oxidises easily. Another topic revolves around the question of a possible cleavage of GSH by endogenous enzymes such as pepsin in the stomach or trypsin and chymotrypsin in the small intestine, so that here too, what you want may not arrive. However, these questions can be answered clearly and confidently due to the special properties of the tripeptide and the available studies. GSH has a γ -carboxyl group that connects the glutamic acid and cysteine with each other via a solid carbon bridge, thus protecting the tripeptide from cleavage during digestion.⁶

In a nutshell: The body protects its precious cargo through intelligent design. Therefore, in our opinion, there is no need for an expensive liposomal coating. If we have nevertheless chosen an enteric-coated encapsulation, it is because we want to achieve a stronger reaction in the small intestine with transfer into the blood. Clinical studies have shown that taking GSH in the form of a small intestine-available food supplement can increase glutathione levels in critical organs such as the lungs, intestines, kidneys, liver as well as in the blood plasma.^{7/8/9/10/11/12}

Current studies show that GSH are readily available from both food and supplements. In a 2020 review of studies to date, Dr. Deanna M. Minich & colleagues write:

*» ... it is apparent that optimizing dietary intake of glutathione precursors, co-factors, and whole foods that have been shown to enhance glutathione status or are a source of glutathione would be a **relatively simple, low cost, and safe approach that could improve health by optimizing glutathione status in an individual**. In a clinical setting this could be implemented with advice to consume foods that have some evidence to suggest they improve glutathione status such as lean protein sources, brassica vegetables, polyphenol-rich fruits and vegetables, herbs and spices, green tea, and omega-3 fatty acid rich-foods such as fish. Dietary supplements may also be useful in certain settings (...).« (Own emphasis)*

Further information by Dr. Heinz Reinwald:

The Glutathion Network: Cell Protection and Detoxification, is available on the homepage: www.drreinwald.science.

Content

60 capsules | 48 g · Sufficient for 30 days.

Source reference

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You can obtain glutathione comp from:



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