

# Zinc Gold

DIETARY SUPPLEMENT



As an athlete, you strive to get the best out of yourself every day. And so you make sure that the trinity of training, rest, and nutrition are as coordinated as possible. Food provides the building blocks and energy required to perform. In addition, your diet provides the vitamins and minerals that you need. One of these minerals is zinc. What makes this micronutrient special is that it is involved in so many different processes. Of course, whether you engage in a lot of physical exercise or not, it is important for everyone to consume enough zinc.

However, due to a number of zinc's properties, considerable attention is paid to a good intake of zinc in all areas of sport. Zinc plays a part in the build-up and breakdown of carbohydrates, fats, and proteins. It contributes to the process of cell renewal and is also an antioxidant.

Strength athletes are often interested in zinc as it helps the body to build protein and contributes to maintaining normal testosterone levels in the blood. Endurance athletes appreciate the fact that zinc supports the body's defence system and contributes to normal carbohydrate and acid-base metabolism. Athletes involved in competitive, endurance, and strength sports, as well as people who play mind sports, benefit from zinc's ability to improve concentration.

## Zinc Gold

Top athletes are required to travel all over the world for tournaments, competitions, and training sessions. This places great demands on the athletes. Zinc Gold is dosed in accordance with the guidelines of the NOC\*NSF Nutrition Team and Olympic Panel.

Virtuoos Zinc Gold has been developed for professional and recreational athletes to support the immune system. Zinc Gold is an excellent way to supplement the amount of zinc in the diet, to ensure that athletes are as prepared as possible in the Netherlands and abroad.

## NZVT Certified

Zinc Gold is produced in accordance with the anti-doping standards and other standards of the NZVT system (Anti-Doping Authority for the Netherlands) and therefore displays the NZVT logo. Zinc Gold can be used by top athletes with confidence, so that they can concentrate on delivering an optimum athletic performance with peace of mind.

## Additional information

This product does not contain any known allergens and is suitable for vegetarians and vegans

## Recommended use

Take one capsule a day with plenty of water, preferably with a meal

## Health Claims

- Supports the immune system
- Helps the body to build protein
- Helps to maintain a normal hormone balance
- Antioxidant
- Three-month pack (90 vegetarian capsules)

### Composition per daily dose (one capsule)

Ingredient	Quantity	% RI	Compound
Zinc (as sulphate)	15 mg	150%	

RI = Reference intake / \* RI not determined



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Zinc is a trace element that is involved in a wide range of processes in the body. It is needed to enable more than 300 various enzymes to function properly. These enzymes are involved in the production, metabolism, and conversion of proteins, carbohydrates, fatty acids, and vitamins. In addition, zinc contributes to DNA synthesis, cell renewal, fertility, and reproduction. It also contributes to the preservation of normal bones, hair, nails, and skin. For athletes, zinc is also important as it helps to maintain normal testosterone values, protects cells from oxidative stress, and contributes to a properly functioning immune system (EFSA claims).

## Daily zinc requirement

- Sources of zinc are meat – especially red meat – dairy products, and seafood (oysters, prawns, mussels), and it can also be found in smaller quantities in beans, nuts, and wholegrain cereals
- The daily zinc requirement for an adult is 7 mg for women and 9 mg for men (Nordic Nutrition Recommendations 2012)
- The average daily zinc intake in the Netherlands is 8–12 mg for adult males and 8–10 mg for adult females, depending on age
- On average, 5–14% of adults do not consume enough zinc. For each age group, it varies between 10% and 16% for men and between 5% and 24% for women (Dutch Food consumption survey 2007–2010)
- Dietary fibre and phytic acid (present in whole grains, peas, and beans) inhibit zinc absorption. Zinc requirements may be higher with high intakes of phytic acid – up to 16 mg for men and up to 13 mg for women (EFSA, Dietary Reference Values for zinc, 2014)
- Frequent prolonged exercise combined with a large amount of perspiration can increase the need for zinc. An endurance athlete loses 0.3 mg (women) – 0.5 mg (men) of zinc per litre of sweat (Keith 2002, Saraymen 2003).
- It has been demonstrated that the plasma zinc value decreases in cases of acute stress (Sports Nutrition, volume 19, 2014)
- A high intake of other minerals, such as calcium, phosphorous, copper, and iron, can impede the absorption of zinc, as they are absorbed in the intestines using the same transport mechanism.

## When is it suitable for use?

- In cases of zinc deficiency or an inadequate zinc intake via the diet. Vegetarians, vegans, and athletes who consume little meat and/or dairy products are at risk of an inadequate intake
- In cases of reduced testosterone levels if there is also a zinc deficiency. Otherwise it does not provide any benefits
- With symptoms of depression. People experiencing symptoms of depression have less zinc in their blood. The more severe the symptoms, the lower the zinc concentration
- To improve the immune system. Zinc can be used as a preventive measure to combat viral infections. The medical panel of the NOC\*NSF advises taking 15 mg of zinc or zinc sulphate on a daily basis
- When a course of 75 mg of zinc per day is started within 24 hours of the first signs of flu, the duration of the illness can be reduced. PLEASE NOTE: This only really applies to zinc lozenges!

## A zinc deficiency can manifest itself in various ways:

- Loss of appetite (first symptom of a zinc deficiency)
- Abnormalities of the skin and mucous membranes
- Impaired immune system
- Diminished taste and hearing
- Reduced resistance to infections, regular colds
- Skin problems, hair loss
- Depression, reduced libido
- It has been shown that a zinc deficiency has a negative effect on plasma testosterone levels, growth hormone, and IGF-1 (Hafiez 1989, Hamza 2012, Om and Chun 1996, Chung 1986, Mansoure 1989)
- Zinc supplementation in cases of zinc deficiency increases the serum levels of testosterone and the IGF-1 values (Hafiez 1989, Hamza 2012)
- Zinc supplementation has an anabolic effect but only if there is a zinc deficiency. When there is enough zinc present, it has no effect on testosterone values (Koehler 2009, Neek 2011)



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## Excessive zinc intake

- A high intake of zinc can lead to nausea, vomiting, stomach cramps, and diarrhoea
- The maximum safe dose in the Netherlands is set to 25 mg (Scientific Committee for Food, 2002). The risk of consuming too much zinc via food is very low
- A prolonged high intake (>50 mg per day) can lead to an iron or copper deficiency. Vice versa, a high intake of iron and copper can interfere with zinc absorption (Clinical Sports Nutrition, 4th edition)

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