

Iron Complex Gold

DIETARY SUPPLEMENT



The billions of cells in our body need a continuous supply of oxygen. Without oxygen, no metabolic processes can occur. An adult takes in around 300 millilitres of pure oxygen per minute while resting. As soon as activity increases, the oxygen requirement also rises. The body adapts to this perfectly. Breathing becomes faster and the heart rate goes up during physical exercise. In particular, the body needs a lot of oxygen during endurance sports like running and cycling. The maximum oxygen intake for men is around 3 litres per minute and for women around 2.6 litres per minute. In top athletes, this can increase to no less than 7 litres per minute. The maximum oxygen intake determines how much oxygen a person can use during exercise. The higher the oxygen intake, the more oxygen there is available for the muscles. The VO2max test shows a person's maximum oxygen intake. This test is the most widely used method for determining a person's stamina. It is seen as an important factor for performance in endurance sports.

Iron

Several groups of athletes have a higher iron requirement. They must take extra care to obtain sufficient iron through their diet. This applies to:

- People who are very active
- Women of a fertile age
- Athletes who follow an energy-restricted diet
- People with low iron intake or who mainly consume a poorly absorbed form of iron (such as vegetarians or vegans)
- Athletes during altitude training

Iron Complex Gold

To maintain a good iron intake, a preparation can be used to supplement the diet. Virtuooos Iron Complex Gold has been

specially formulated for athletes and contains three different iron compounds. One of these compounds is Ferrochel. Ferrochel is an advanced iron chelate that has been developed by Albion Advanced Nutrition. The iron in it is attached to amino acids. This product also contains vitamin C, which supports the absorption of plant-based iron.

NZVT Certified

Iron Complex 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. Iron Complex 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 vegetarian capsule a day with plenty of water, preferably with a meal.

Health Claims

- Three different iron compounds
- Contributes to the production of red blood cells
- Helps to reduce fatigue
- Contains vitamin C for improved absorption
- Ideal for increased iron requirements

Composition per daily dose (one vegetarian capsule)			
Ingredient	Quantity	% RI	Compound
Vitamin A (as retinol acetate)	0.8 mg	100%	
Vitamin B1 (as thiamine nitrate)	1.1 mg	100%	
Vitamin B2 (as riboflavin)	1.4 mg	100%	
Vitamin B9 (as folic acid)	0.2 mg	100%	
Vitamin B12 (as cyanocobalamin in mannitol)	2.5 µg	100%	
Vitamin C (as ascorbic acid)	80 mg	100%	
Iron (as fumarate)	14 mg	100%	
Iron (as gluconate)	14 mg	100%	
Ferrochel™ Iron (as bisglycinate)	14 mg	100%	
Copper (as bisglycinate)	1.0 mg	100%	
RI = Reference intake / * RI not determined			

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Iron Complex Gold

DIETARY SUPPLEMENT



Muscles need oxygen to exercise and to perform. More and more oxygen is needed as activity is increased. Oxygen is transported through the body via the red blood cells, bound to the transport protein haemoglobin. An important element of haemoglobin is iron. Transport of oxygen will be limited if there is a shortage of iron. Athletes are at risk of an iron deficiency if they consume insufficient iron over a prolonged period of time, if they lose a large amount of iron through blood loss, or if they have a poor absorption capacity.

Via diet

Iron occurs in food as haem iron and non-haem iron. Haem iron is most easily absorbed and is mainly found in animal products, such as beef, fish, and chicken. Non-haem iron occurs in both animal and plant-based foods, such as bread and wholemeal products, legumes, nuts and dark green leafy vegetables, and eggs. Around 25% of haem iron is absorbed, while the percentage for non-haem iron is lower (1–10%). The presence of vitamin C (via fruits and vegetables) can have a positive influence on the absorption of non-haem iron. On the other hand, absorption is inhibited if you eat grains and legumes (phytates) or drink tea or coffee at the same time. Calcium-rich products, such as milk and cheese, reduce the absorption of both haem and non-haem iron.

Iron absorption varies

The body stores around 3–4 mg of iron. It is found in all cells of the body, especially in red blood cells (65%). Around 20% to 30% of the iron is stored as ferritin. An average diet contains 10–15 mg a day. The amount you actually consume depends on the iron stores in your body. The average intake is around 15%, which can rise to 40% as the need increases. Men lose around 1 mg of iron each day. In women, this amount can rise to 2–5 mg per day during menstruation.

Supplementation

If it is not possible to obtain enough iron through your diet, an iron supplement may be required. Below is a list of situations in which there is an increased need for iron and it may be useful to have your iron status checked by a doctor:

Situations in which there is an increased need for iron:

- Endurance athletes in particular experience a greater loss of iron through sweat, stools, and urine
- When following a vegetarian or vegan diet. Iron from food will mainly be non-haem iron. The absorption of this type of iron is lower than that of haem iron. This is more likely to lead to a deficiency
- Altitude training. Before starting scheduled altitude training, it may be sensible to have your iron status checked. A good iron status is important for effective altitude training. It is therefore advisable to have your blood checked at least two weeks beforehand. It can then be determined whether additional iron is needed (Govus, 2015)
- With frequent or excessive blood loss (heavy periods, recent operation) or if absorption in the gastrointestinal tract is inhibited, such as with Crohn's disease or ulcerative colitis
- During weight loss and an energy-restricted diet or a very one-sided diet that does not contain enough animal products.

Recommendations

- Athletes should have their blood tested regularly so that any deficiencies can be detected in time
- Symptoms such as fatigue, pale skin, restless legs, and impaired performance can indicate an iron deficiency
- If you have an iron deficiency, ask a dietician or doctor for advice on nutrition and additional supplementation
- If your diet is inadequate, additional iron is recommended in the form of ferrous gluconate and ferrous fumarate (Jenkinson, 2008)
- It takes six to eight weeks to improve your iron status with supplements (Goodman, 2011)
- The use of an iron supplement may cause gastrointestinal problems such as nausea and constipation
- It is not recommended to take iron supplements if you do not have an iron deficiency.~
This can lead to iron overload which may cause harm to the heart and liver.



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