



# FAST FACTS ABOUT CHELATED IRON

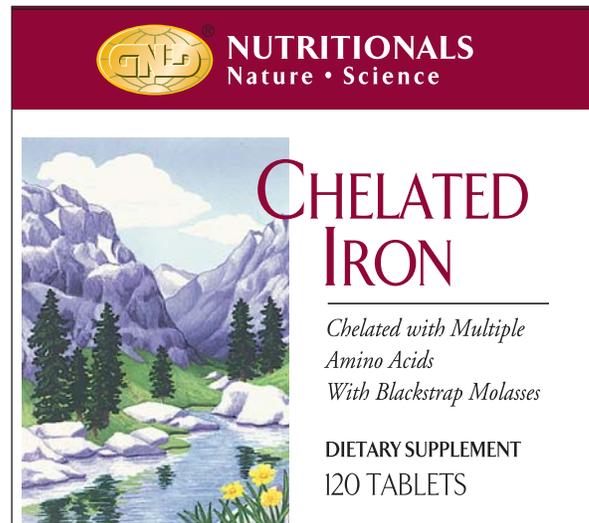
Iron is one of the most important nutritional elements and is of fundamental importance to life. It is a key component of enzymes involved in energy metabolism and of proteins which carry oxygen in the blood and muscles. Iron must be supplied by the diet, yet dietary iron is poorly absorbed. GNLD's Chelated Iron features whole-food iron from blackstrap molasses, chelated with amino acids for improved absorption.

## WHY IRON?

- More than 500 million people worldwide suffer from iron-deficiency anemia. In the world's prosperous nations, iron deficiency occurs mostly during:
  - Ages 6 months to 4 years, when rapid body growth boosts iron requirements.
  - Adolescence, when production of red blood cells and muscle development are critical.
  - Menstrual years in girls and women, due to monthly blood loss.
  - Pregnancy, when fetal growth demands adequate iron supplies.
- Iron deficiency can result in:
  - anemia
  - impaired immunity
  - apathy, irritability
  - short attention span
  - reduced ability to learn
  - delayed development of language
- On average, only 10% of the iron ingested in foods is absorbed and utilized for crucial bodily functions.

## WHY GNLD CHELATED IRON?

- High potency and purity from pharmaceutical-grade iron.
- Chelated for improved absorption. In GNLD's unique chelation process, iron is bound to natural amino acids, a process proven to improve iron absorption in the body. This is particularly important since only 10% of dietary iron is normally absorbed.
- Whole-food iron from naturally iron-rich blackstrap molasses.



Supplement Facts		
Serving Size 1 Tablet		
Amount Per Serving	% Daily Value	
Iron (chelated)	25 mg	138%
Ingredients: Microcrystalline cellulose, molasses, dicalcium phosphate, stearic acid, hydroxypropyl methylcellulose, silicon dioxide, magnesium stearate, triacetin and natural color. Contains milk, soy and wheat.		
	Kd	Lot #
511	Best If Used By	

### SUGGESTED USE: 1 tablet daily (mid-morning is best).

The body needs iron for energy metabolism, red blood cell development, and healthy teeth, skin, nails and bones. Iron is especially important for the health of pregnant women and those of childbearing age.\*

\* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

The body only absorbs about 10% of the iron in food. GNLD's double amino chelates support significantly higher iron absorption.

WARNING: Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under six. Keep this product out of reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

Store in a cool, dry place, away from direct sunlight. Packaged with safety seal.

NOT SOLD IN RETAIL STORES  
Available Exclusively From GNLD Distributors



# THE CHELATED IRON STORY

## HEALTH ESSENTIAL THAT'S HARD TO GET

Called the “metal of heaven” in ancient writings because it was a component of meteors, iron has been known since the ancient Greeks for its health-imparting properties. As early as the 17th century in England, iron was found to be a specific treatment for anemia in humans. In 1867, the French chemist Boussingault obtained experimental evidence of the essential nature of iron in nutrition.

Despite the very small amount of iron found in the body — only about 3-4 gm in an adult — more deficiencies of iron exist in the United States and in most other developed countries than of any other nutrient. An estimated 25% of the population is affected.

Iron-deficiency anemia is a medical and public health problem of primary importance, causing few deaths but contributing seriously to the weakness, ill health, and substandard performance of millions of people. Lack of iron in the diet is attributed primarily to the increased refining and processing of our food supply, and the decreased use of cast-iron cookware.

The challenge of obtaining enough iron through the diet is compounded by the fact that, on average, only about 10% of the iron in foods is absorbed and utilized by the body. The absorption of iron is also affected by other components of the diet. For example, vitamin C promotes iron absorption when it is consumed with iron in a meal. However, iron absorption is inhibited by the tannins in tea and coffee, calcium in dairy products, polyphenols in some vegetables, and phytates in whole-grain cereals, legumes, nuts and seeds, and soy protein.

## TRACE MINERAL ESSENTIAL FOR GROWTH AND HEALTH

Iron combines with protein to make hemoglobin for red blood cells; *heme* means iron, *globin* means protein. As a component of hemoglobin, iron is essential for transporting oxygen in the blood and in muscle tissue (as part of myoglobin). Iron is also a component of enzymes which are involved in energy metabolism. Iron may also contribute to muscular and mental function.

About 70% of the body's iron supply is present in the hemoglobin. Most of the rest is stored as a reserve in the liver, spleen, and bone marrow. Although red blood cells break down and are replaced about every 120 days, the liberated iron is not excreted; most of it is utilized to form new hemoglobin. In order to maintain a healthy iron balance, the body must absorb enough from the daily diet to offset iron lost when cells are shed from the skin and interior surfaces (such as the intestines), and, in women of childbearing age, through normal menstrual bleeding.

## POPULATIONS AT PARTICULAR RISK FOR IRON DEFICIENCY

Iron deficiency may produce a wide range of ill effects, such as decreased capacity for work with a greater tendency for fatigue, impaired immune function, decreased athletic performance, cognitive deficits in small children, and a greater risk of compromised pregnancy.

Iron stores tend to be lowest in pregnant women, menstruating women, adolescents of both sexes, young children, and the elderly, so that these groups are at higher risk of iron deficiency.

NOTE: GNL's Vita-Squares have been formulated to adequately meet the iron intake needs of children over the age of two.

**Pregnant women.** If a pregnant woman has an insufficient intake of iron, the newborn infant, in turn, will have a relatively low store of iron at birth. This can cause iron deficiency to become more pronounced in the first year of life, as milk has a low iron content and babies are not born with enough stored iron to meet their needs beyond the age of six months. Iron deficiency, including anemia (a severe deficiency) is especially common in premature infants and twins, because in such circumstances the infants' body reserves of iron were not built up to desirable levels before birth.

Studies have shown that moderate to severe iron anemia in pregnant women was associated with increased incidence of spontaneous abortion, premature delivery, low-birth-weight delivery, stillbirth, and infant death.

**Adolescents.** Rapid growth between the ages of 10 and 17 spurs the production of red blood cells and the development of muscles, both of which require iron.

Teen athletes may require even more iron, as high-impact sports may damage red blood cells, increasing the need for iron to produce new cells. One study showed that among healthy high school female cross-country runners, iron stores decreased 40% in those who did not receive supplements during the running season.

Teenage girls can be notorious dieters, and several vitamins and minerals, including iron, are deficient in many diets. Monthly menstrual blood loss can also lead to anemia in teenage girls. Of equal concern is milder iron deficiency that may have serious negative effects and go unnoticed. A study at Johns Hopkins University School of Medicine tested learning functions in 78 teenage girls who had low iron levels but were not anemic. Girls receiving iron supplements performed better on tests for attention, verbal learning, and memory than girls in a control group. It is estimated that up to 25% of adolescent girls are iron-deficient.



**Pre-menopausal women.** Iron depletion is common in women who menstruate, despite low occurrences of actual anemia. A study of 111 women aged 18-40 showed that 39% were iron depleted, while only 3.6% were anemic as reflected in low hemoglobin values. The most common symptoms of anemia are pale skin and abnormal fatigue, but depression and unusual impatience may also signal a deficiency.

**Seniors.** Older adults tend to develop anemias more often than any other blood disorder. Aging may contribute to iron-deficiency anemia in a number of ways. A decrease in hydrochloric acid or increased use of antacids may decrease iron absorption, while frequent or excessive use of aspirin or non-steroidal anti-inflammatory drugs (NSAID) may irritate the stomach and cause bleeding.

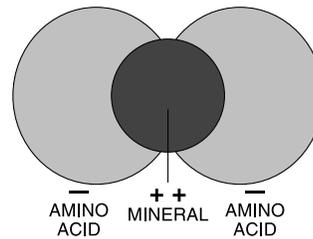
A study conducted by the U.S. National Institute on Aging has linked low blood levels of iron to an increased likelihood of death in the elderly population. Unlike a previous study of middle-aged Finnish men, the U.S. study found no link between high iron levels and an increased risk of heart attack. In fact, the opposite was the case! Among 4,000 men and women over the ages of 71, the five-year study found that men with the highest iron levels had only 20% the risk of dying from coronary artery disease than **men in the lowest iron category.** And women with the highest iron levels were about **half as likely to die of heart disease** compared with those in the lowest iron category. Looking at death from all causes, men with higher iron were at 38% less risk, and high-iron women were at 28% less risk compared with people in the low iron categories.

## GNLD DELIVERS IRON CHELATED WITH NATURAL AMINO ACIDS

GNLD utilizes a pharmaceutical-grade of ferrous iron that is both high-purity and high-potency.

In our unique chelation process, pharmaceutical-grade iron is bound to natural amino acids derived from milk protein. In this exclusive process, two amino acid molecules bond with each iron atom to form our exclusive 2-to-1 iron–amino acid chelate. Tests show that amino acid chelation improves iron absorption.

Once chelation of the pharmaceutical-grade iron is complete, that material is carefully blended with one of nature's most abundant, natural plant-derived iron sources, blackstrap molasses. A specially processed variety of this whole-food source contributes a significant quantity of pure iron to each tablet.



Note: About a million Americans (approximately 1 out of every 250) suffer from a rare disease called hemochromatosis, a hereditary disorder affecting people of European descent which disrupts the body's natural iron regulation so that an excess builds up. People diagnosed with hemochromatosis need medical supervision to regulate iron stores. It should be remembered that far more people are iron-deficient than are at risk for iron overload.