



## Ferrous Bisglycinate, HCl

### Iron Deficiency

Iron deficiency is considered the number one nutritional disorder in the world. The World Health Organization has estimated up to 80% of the world population may be iron deficient. Women are particularly susceptible to iron deficiency. Iron is an essential element for human physiology. It plays an integral part in many of the proteins and enzymes that maintain good health.

Today's emphasis on healthy lifestyles can be a contributing factor that impacts an individual's iron status. Vegetarian diets are often low in iron and especially low in the forms of dietary iron that are best absorbed. A typical vegetarian diet may require twice the amount of the dietary iron to maintain status, due to lower absorption. Intense exercise can also increase the need for iron. It has been estimated that those who engage in regular exercise may have a 30% increase in the need for iron intake.

### Iron Absorption

Iron absorption is effected by the form of iron in the diet. Heme iron, found in animal products, is highly absorbed. Other dietary iron is absorbed through a different absorption pathway. Absorption of this iron is dependant on the solubility of the iron, the more soluble being better absorbed. Dietary absorption inhibitors will reduce the absorption of iron. Polyphenols, tannins, phytates and calcium are known inhibitors of iron absorption.

### Iron Chelates

The amino acid, glycine, complexes with iron to form a stable ring structure. This structure is know as a chelate. Chelation can protect dietary iron from interactions with dietary absorption inhibitors. This protection allows the iron to be absorbed and available for use in the body.

### Ferrous vs. Ferric

Iron can be complexed in one of two oxidation states. The resulting compounds are named by the oxidation state of the iron, ferrous and ferric. While both states can form stable chelate structures, ferrous compounds typically have higher bioavailability due to higher solubility. Ferrous Bisglycinate is the glycine chelate of ferrous iron.

### Nutrisol's Ferrous Bisglycinate, HCl

Nutrisol manufactures a special form of ferrous bisglycinate. This product is Ferrous Bisglycinate, HCl. Ferrous bisglycinate, HCl has higher solubility than ferrous bisglycinate. Also, the HCl is a reducing agent that helps the iron stay in the ferrous oxidation state. This enhancement of ferrous bisglycinate improves the high bioavailability of this form of iron, and is suitable for dietary supplements, as well as many food fortification applications.

Contact your distributor or Nutrisol direct for additional information on this novel iron supplement.