

Ferrochel

(iron bis-glycinate chelate)



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- **A true iron chelate from Albion Minerals**
- **More absorbable and bioavailable with less gastrointestinal side-effects**
- **Less potential for iron toxicity**
- **Does not block absorption of other nutrients**
- **Iron replenishment for a multitude of clinical applications:**
 - **Microcytic hypochromic anemia**
 - **Dietary inadequacy (ie: Vegetarianism)**
 - **G.I. malabsorption syndromes (Celiac, Crohn's, etc.)**
 - **Fatigue syndromes related to anemia**
 - **Anemia due to chronic bleeding (ie: ulcer, gastritis, heavy menses, etc.)**

Ferrochel is a patented iron in the form of iron bis-glycinate, providing 27 mg of elemental iron (150% of RDA). Unlike common forms of supplemental iron, this form of iron carries no electrical charge, making it easier to absorb and less likely to block the absorption of other nutrients, such as vitamin E, ascorbic acid, and calcium. Because Ferrochel is a neutral, fully-reacted molecule, it doesn't break down in stomach acid and is delivered intact to the intestine, where it is easily absorbed. Inorganic iron supplements, such as ferrous sulfate, have low bioavailability and often produce unpleasant gastrointestinal side effects, such as nausea, constipation and gastric upset. The form of iron in Ferrochel gives clinicians a better alternative.

CLINICAL NEED

Iron is an essential nutrient in human health. It plays an important role in tissue oxygenation, immune function, connective tissue integrity, cardiovascular health, and cognitive development. Iron is a constituent of hemoglobin, myoglobin, ferritin, and a number of endogenous enzymes. While iron can be found in fresh green leafy vegetables, corn and in beans (soybeans, kidney beans), its bioavailability is poor from plant sources. Iron from meat is much more bioavailable, but many people have such poor digestive health that they avoid meat due to poor tolerance. For these, as well as other metabolic reasons, the World Health Organization estimates that 1.3 billion people are suffering from iron deficiency anemia world-wide. It is more common in females, particularly those with heavy menses, and accounts for a significant amount of chronic fatigue and lethargy.

CLINICAL USAGE

Ferrochel can be used to replete iron in cases of deficiency due to dietary factors, such as improperly managed vegetarianism, or in cases of malabsorption due to gastrointestinal diseases, such as Celiac or Crohn's. More functional forms of gastrointestinal mucosal damage and inflammation, such as food allergy, dysbiosis, and the use of various medications, can also alter absorption negatively. Ferrochel is the optimal form of iron to correct iron-deficiency anemia. However, underlying causes of iron-deficiency, such as heavy menses, ulcers, gastritis, stomach cancer, or other causes of chronic bleeding must also be evaluated in addition to supplementation. Studies in children have shown supplemental iron to improve nutritional status, physical fitness, and cognitive performance.

SAFETY

While iron is critical for proper metabolism and tissue perfusion, too much can also be a problem. Ferrochel has been found to be safer than typical iron salts found in foods and dietary supplements, and does not produce any pathological side-effects in animals, even after long-term feeding. Various clinical trials have shown that iron bis-glycinate's (Ferrochel) absorption is controlled by body iron stores, with greater levels being absorbed by individuals with lower iron status. Albion has qualified Ferrochel (iron amino acid chelate) for self affirmation as GRAS (generally regarded as safe) by producing an extensive array of independently run toxicology studies, and having them reviewed by a panel of food safety experts. These experts concluded that Ferrochel met the appropriate specifications to be considered GRAS for food fortification. The panel found Ferrochel to have a NOAEL (no observed adverse effect level) of greater than 500 mg of iron/kg bw/day. This is an astounding safety level for any iron ingredient, let alone one that has been shown to have the high level of bioavailability and effectiveness seen in the research on Ferrochel.

IRON-SOURCE CHARACTERISTICS		
	Ferrochel	Iron Salts
Benefits		
High bioavailability	X	
Electrically neutral	X	
Well tolerated	X	
Drawbacks		
Pro-oxidant effect		X
Interferes with other nutrients absorption		X
Requires vitamin C for absorption		X

References

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