

You have been diagnosed with iron deficiency anemia. The following information outlines treatment, side effects and recommended dietary sources of iron in addition to your recommended medications.

ANEMIA TREATMENT- Adapted from UpToDate Patient Information

The treatment for iron deficiency anemia is an iron supplement, which may be taken by mouth or given as an injection (called parenteral iron). This iron is needed to increase production of hemoglobin and also to rebuild the body's iron reserves.

Oral iron tablets are recommended in most people with iron deficiency anemia. Injections of iron are usually reserved for people whose digestive tract is unable to adequately absorb iron or in those who are unable to tolerate oral iron.

Oral iron — Oral iron tablets are usually a safe, inexpensive, and effective treatment for people with iron deficiency. The following tips are recommended:

- Enteric coated (EC) iron tablets are not recommended because iron is best absorbed from the duodenum and jejunum (the first and middle parts of the small intestine). EC iron releases iron further down in the intestinal tract, where it is not as easily absorbed. In some cases, the EC iron tablet passes through the entire intestinal tract with the coating intact, meaning that none of the iron was absorbed.
- Certain foods and medicines can reduce the effectiveness of iron tablets. Iron tablets should not be taken with food, certain antibiotics, tea, coffee, calcium supplements, or milk. Iron should be taken 1 hour before or 2 hours after these items. Iron should be taken 2 hours before or 4 hours after antacids.
- Iron tablets are best absorbed in an acidic environment; taking iron with one 250 mg vitamin C tablet or orange juice can enhance iron absorption.

Types of oral iron — There are several types of oral iron. The primary difference between the types is the amount of elemental iron each contains. There is no evidence that one form of iron is more effective than another.

- Ferrous fumarate — 106 mg elemental iron/tablet
- Ferrous sulfate — 65 mg elemental iron/tablet
- Ferrous sulfate liquid — 44 mg elemental iron/teaspoon (5 mL)
- Ferrous gluconate — 28 to 36 mg iron/tablet

The recommended daily dose of elemental iron for adults with iron deficiency in adults is 150 to 200 mg/day. The least expensive form of iron is iron sulfate. As an example, one 325 mg iron sulfate tablet taken three times per day supplies 195 mg of elemental iron per day. A healthcare provider can help to determine what dose and type of iron is most appropriate.

Side effects — Some people experience nausea, constipation, stomach upset, and/or vomiting after taking oral iron. Options for dealing with these side effects include:

- Take a smaller dose

- Use a formulation with a lower elemental iron content (eg, ferrous gluconate instead of ferrous sulfate)
- Take the liquid form of ferrous sulfate and adjust the dose until symptoms are tolerable.

Taking iron tablets will turn the stool a dark, almost black color. This is to be expected, and does NOT mean that the iron tablets are causing intestinal bleeding.

Duration of treatment — Treatment with oral iron is recommended for as long as it takes the hemoglobin and hematocrit to return to normal. A blood count is often repeated one to two months after starting iron to determine if the treatment has been effective.

When the Hgb has returned to normal, treatment with iron may be discontinued. However, some clinicians recommend continuing the iron for at least six months after the Hgb normalizes in order to replenish the body's iron stores.

Iron and diet — Although dietary iron is important in preventing iron deficiency, people with iron deficiency anemia need more iron than they can consume through their diet alone. In a 2000 calorie diet, there is only about 10 mg of elemental iron (compared to 65 mg in one 325 mg iron sulfate tablet). Therefore, increasing dietary iron alone is not usually recommended as a treatment for iron deficiency anemia, although it may be recommended in combination with iron therapy.

Dietary sources of iron are found in meat, grains, fruits, and vegetables ([table 1](#)). For people who do not eat meat, good plant sources of iron include whole or enriched breads or grains, iron-fortified cereals, legumes, green leafy vegetables, dried fruits, soy products, blackstrap molasses, bulgur, and wheat germ. To maximize absorption, iron-rich foods should not be consumed with coffee or tea. Taking vitamin C or drinking orange juice with high iron foods can further enhance absorption.

Dietary sources of iron

Food	Approximate measure	Iron, mg
High iron sources		
Cream of Wheat (quick or instant)*	1/2 cup	7.8
Kidney, beef•	2 oz (60 g)	5.3
Liver, beef•	2 oz (60 g)	5.8
Liver, calf•	2 oz (60 g)	9.0
Liver, chicken•	2 oz (60 g)	6.0
Liverwurst•	2 oz (60 g)	3.6
Prune juice	1/2 cup	5.1
Spinach	1/2 cup	3.2
Moderate iron sources		
All-Bran cereal	1/2 cup	2.9
Almonds, dried unblanched	1/2 cup	3.0
Dried beans and peas		
Baked beans, no pork	1/4 cup	1.5
Blackeye peas, cooked	1/4 cup	0.8
Chick peas, dry	1/4 cup	3.5
Great northern beans, cooked	1/4 cup	1.3
Green peas, cooked	1/4 cup	1.4
Lentils, dry	1/4 cup	3.4
Lima beans, cooked	1/4 cup	1.3
Navy beans, cooked	1/4 cup	1.3
Red beans, dry	1/4 cup	3.5
Soybeans, cooked	1/4 cup	1.4
White beans, dry	1/4 cup	3.9
Beef, cooked	2 oz (60 g)	2-3Δ
Ham, cooked	2 oz (60 g)	1.3
Lamb, cooked	2 oz (60 g)	1.9
Peaches, dried	1/4 cup	2.4
Peanuts, roasted without skins	3 1/2 oz (100 g)	3.2
Pork, cooked	2 oz (60 g)	2-3◇

Prunes, dried	2 large	1.1
Scallops	2 oz (60 g)	1.6
Turkey, cooked	2 oz (60 g)	1.7

* Or other fortified cereals which contain 10 mg of iron per ounce or 100 percent RDA per serving.

• As organ meats are generally high in cholesterol, these iron-rich foods should be eaten in moderation.

Δ Depending on cut, the greatest amounts of iron are generally found in the chuck, flank, and bottom round cuts of beef.

◇ Depending on cut, the greatest amounts of iron are generally found in the loin, sirloin, tenderloin, and picnic shoulder cuts of pork.

§ Raisins, nuts, and seeds are not generally recommended for children under age three because of risk of choking.

Data from: Walker, WA, Watkins, JB (Eds), Nutrition in Pediatrics, 2nd ed, BC Decker, Inc, London 1997.