

Understanding Iron

Brown Health Services Patient Education Series

Why is iron important?

We predominantly need iron for hemoglobin, a protein that helps deliver oxygen to the rest of your body. This mineral can be found in many foods. There are also iron supplement pills and liquids.

How do we lose iron?

We lose small amounts in urine, stool, the gastrointestinal tract and skin. Losses can be greater during menses. Iron deficiency ranges from mild iron deficiency due to depletion of iron stores to iron deficiency anemia.

How to test for iron deficiency?

A blood test to evaluate ferritin concentration can diagnose iron deficiency. At the beginning of iron depletion, the ferritin level is low before iron deficiency anemia occurs. It is important to remember that inflammation from conditions such as infection can increase ferritin levels in the blood. Additional blood tests may be needed.

What is adequate iron intake?

For people ages 19-50, adequate iron intake is 18 mg a day for a person with a vagina and 8 mg per day for a person with a penis. Iron obtained through food sources is either heme or nonheme iron. Heme iron is generally better absorbed than nonheme iron. Meat, seafood and poultry provide heme and nonheme iron. Plants and iron-fortified foods contain only nonheme iron.

Are there side effects to increasing iron?

People tolerate increases in iron variably. At first, adding iron to the diet may affect your bowel movements-making them slower to pass and darker in color. Be sure to drink water and other beverages

throughout the day. Fluids help to soften stools and make them easier to pass.

Iron content of common foods:

Fortified grain products

Cereal, fortified 1 cup ranges from 4-18mg

Whole wheat bread 1 slice 1 mg

White bread 1 slice 1 mg

Spaghetti, whole wheat cooked, 1 cup 1 mg

Nuts

Cashew nuts roasted 1 oz 2 mg

Pistachios roasted 1 oz 1 mg

Fruits

raisins, seedless ¼ cup 1 mg

Legumes

White beans, canned 1 cup 8 mg

Lentils, boiled and drained ½ cup 3 mg

Kidney beans, canned ½ cup 2 mg

Chickpeas boiled and drained ½ cup 2 mg

Rice

Brown, cooked 1 cup 1 mg

White, cooked ½ cup 1 mg

Vegetables

Spinach (cooked) ½ cup 3 mg

Tomatoes canned, stewed ½ cup 2 mg

Potato baked, 1 medium 2 mg

Green peas boiled ½ cup 1 mg

Broccoli boiled ½ cup 1 mg

Plant based protein

Tofu, firm ½ cup 3mg

Meats

Beef liver, pan fried 3 oz 5 mg

Beef braised, 3 oz 2mg

Chicken roasted meat and skin 3 oz 1 mg

Turkey roasted 3 oz 1 mg

Seafood

Oysters, cooked 3 oz 8 mg

Sardines, canned in oil 3 oz 2 mg

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Tuna light canned 3 oz 1 mg

Additionally:

Egg, hard boiled 1 large 1 mg

Chocolate, dark 45%-69% cacao, 1 ounce 2 mg

Cooking food in a cast iron skillet leaches iron into the food as well

Iron Supplements:

Multivitamins with minerals typically provide 18 mg of iron for daily maintenance needs. However most gummy vitamins do not contain iron. You should only take an iron supplement when diagnosed with iron deficiency. Iron-only supplements deliver more, sometimes as much as 65 mg iron.

The iron in supplements can be

- ferrous sulfate
- ferrous gluconate
- ferric citrate
- ferric sulfate

Considerations for iron supplementation:

- Absorption is better on an empty stomach along with something with vitamin C, such as citrus juice. Many people cannot take iron supplements on an empty stomach due to nausea and need to have it with food.
- Just plan to avoid taking iron supplements with dairy or calcium supplements as that can decrease absorption
- Taking the supplement every other day rather than daily actually decreases constipation, AND increases absorption

When taking iron supplements keep in mind more iron may not be better; it is possible to have too much iron which is not good. It may also take up to 3 months to normalize iron stores with oral supplementation.

References:

NIH Iron Fact Sheet

Up to Date