Palo Alto Medical Foundation
A Sutter Health Affiliate

# Preventing and Treating Iron Deficiency

Iron is an element critical to formation of red blood cells. Chronic lack of iron eventually leads to anemia (low red-blood-cell count). Anemia can cause fatigue, irritability and headaches (although these common symptoms can also occur with other medical conditions and in otherwise healthy people). Many people, particularly children and menstruating teens and women, find it challenging to include enough iron in their diets to maintain red-blood-cell formation. Others at risk to develop iron-deficiency anemia include those who lose blood through their gastrointestinal tract, those with inadequate vitamin C intake, those who diet to lose weight, and those who have had major surgery. Anemia is diagnosed by a simple blood test.

## Daily iron requirements: How much do you need?

| Age | Iron Requirement |
|---|---|
| **Infants < 6 months** | **No supplement** |
| **Infants > 6 months, Formula Fed** | **Iron-fortified formula** |
| **Infants > 6 months, Breast Fed** | **11 mg.** |
| **Children from 1 through 3 years** | **7 mg.** |
| **Children from 4 through 8 years** | **10 mg.** |
| **Children from 9 through 13** | **8 mg.** |
| **Teens 14 through 18 years** | **11 mg. males; 15 mg. females** |
| **Adults 19 through 50** | **8 mg. males; 18 mg. females** |
| **Adults 51 to over 70** | **8 mg.** |
| **Pregnancy, all ages** | **27 mg.** |
| **Lactation 14 through 18 years** | **10 mg.** |
| **Lactation 19 through 50 years** | **9 mg.** |
| **Adolescents and adults < 50 years** | **10 mg.** |
| **Adults > 50 years** | **10 mg.** |

## Food Sources of Iron

There are many excellent food sources of iron. Please see the next page for iron content in common foods. Iron from animal sources is more efficiently absorbed than iron from plant sources. However, iron absorption from all foods can be enhanced in several ways:

- Eat foods rich in vitamin C, such as orange or grapefruit juice.
- Cook in iron pots and pans.
- Avoid caffeine when eating iron-rich foods, since caffeine reduces iron absorption.
- Infants who are formula fed generally should drink iron-fortified formulas; breast-fed infants should begin iron-fortified cereals at age 6 months.

## Iron Supplements

An oral iron supplement is sometimes recommended for people. If you are not iron deficient, you should not take such a supplement, because too much iron can be harmful. Several iron supplements are available without a prescription. All may cause some gastric distress or constipation, although individual reactions may differ. You may tolerate one product better than another. Taking iron supplements with food decreases such symptoms. All are better absorbed on an empty stomach, taken with orange or grapefruit juice or vitamin C. Avoid taking supplements with milk or calcium supplements, which decrease iron absorption. Some iron supplement examples are:

- Ferrous Sulfate (such as Slow Fe, Feosol, Fer-In-Sol): usually the cheapest form, well absorbed, can cause gastric distress or constipation.
- Ferrous Gluconate (such as Fergon): more expensive and causes less gastric distress.
- Ferrous Fumarate (such as Ferro-Sequels): similar to ferrous gluconate; contains stool softener.

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# Common Foods and Iron Content

| Food | Amount | Iron (mg.) | Calories |
|---|---|---|---|
| **Beef** | | | |
| Liver, braised | 3.5 oz. | 6.77 | 161 |
| Round, top, broiled, 1/4" fat trim | 3.5 oz. | 2.88 | 215 |
| Ground, 85% lean, baked | 3 oz. | 2.2 | 213 |
| **Pork** | | | |
| Loin, braised | 3.5 oz. | 1.40 | 273 |
| **Poultry** | | | |
| Turkey, dark, no skin, roasted | 3.5 oz. | 1.78 | 175 |
| Chicken, breast, no skin, roasted | 1/2 breast | 0.89 | 142 |
| Chicken, thigh, no skin, roasted | 1 thigh | 0.68 | 109 |
| **Fish, Shellfish** | | | |
| Clams, cooked by moist heat | 3 oz. (19 small) | 23.76 | 126 |
| Mussels, blue, cooked by moist heat | 3 oz. | 5.71 | 147 |
| Trout, rainbow, cooked by dry heat | 3 oz. | 2.07 | 129 |
| Ocean perch, cooked by dry heat | 3 oz. | 1.00 | 103 |
| **Grains and Grain Products** | | | |
| Bran Flakes, Kellogg's | 3/4 cup (1 oz.) | 18.00 | 90 |
| Spaghetti, enriched, cooked | 1 cup | 1.96 | 197 |
| Tortilla, corn, enriched | 1 tortilla | 1.42 | 67 |
| Bread, whole wheat, Roman Meal | 1 oz. slice | 1.20 | 65 |
| Oats, regular/quick/instant dry | 1/3 cup (1 oz.) | 1.14 | 104 |
| **Vegetables/Fruits/Legumes** | | | |
| Lentils, boiled | 1 cup | 6.59 | 230 |
| Kidney beans, boiled | 1 cup | 5.20 | 225 |
| Beans, baked, Van De Camp's | 1 cup | 3.60 | 260 |
| Spinach, boiled | 1/2 cup | 3.21 | 21 |
| Potato, baked, with skin | 1 potato | 2.75 | 220 |
| Prunes, dried | 10 prunes | 2.08 | 201 |
| Raisins, seedless | 2/3 cup | 2.08 | 300 |
| Apricots, dried, sulfured | 10 halves | 1.65 | 83 |
| Peas, green, frozen, boiled | 1/2 cup | 1.26 | 63 |
| Tomato juice | 6 fluid oz. | 1.06 | 32 |
| Dates, dried | 10 dates | 0.96 | 228 |
| Turnip greens, boiled and chopped | 1/2 cup | 0.57 | 15 |
| **Misc. foods** | | | |
| Molasses, blackstrap | 1 tablespoon | 3.50 | 47 |
| Molasses, regular | 1 tablespoon | 0.94 | 53 |
| Peanut butter, creamy/smooth | 2 tablespoon | 0.53 | 188 |
| Sunflower seeds, dried | 1 oz. | 1.98 | 162 |
| Spices* | | | |

* Spices high in iron content include cumin, coriander, cardamom, fenugreek and tumeric. For lists of additional foods with iron content, see http://fnic.nal.usda.gov/