

## Iron: Build Strong Blood

*Ann Hertzler, former Extension specialist, Department of Human Nutrition, Foods and Exercise  
Amanda Holsinger, Dietetic intern, Department of Human Nutrition, Foods and Exercise*

### Iron in the Body

Iron is an important nutrient for your body and for your health. It helps your cells “breathe.” Iron works with protein to make the hemoglobin in red blood cells. The hemoglobin carries oxygen to all parts of the body so it can perform its normal functions. The body stores iron in the liver, spleen, and bone marrow.

Most Americans obtain enough iron from their diets. Still, without enough iron, you can acquire a condition called iron-deficiency anemia, most common among women and children. Symptoms include feeling weak and tired. Too much iron can also be harmful. Eating excessive amounts of iron-rich foods has been associated with a higher risk of heart disease. Getting the right amount of iron in your diet is important.

### Iron Recommendations

The amount of iron you need depends on your age, gender, and activity level. For example, iron needs increase during periods of rapid growth, such as during pregnancy, childhood, and adolescence when new tissue is being built. Women and teenage girls need more iron than men because of menstrual losses. Competitive athletes may also experience an increased need for iron.

Most individuals can obtain enough iron from foods and do not require a supplement. If you have any questions about how much iron you need, see your physician or a registered dietitian.

Iron Recommendations	
	Dietary Reference Intakes (mg)
<b>Infants and children</b>	
1 - 3 years	7
4 - 8 years	10
<b>Men</b>	
9 - 13 years	8
14 - 18 years	11
19+ years	8
<b>Women</b>	
9 - 13 years	8
14 - 18 years	15
19 - 50 years	18
51+ years	8
<b>Pregnancy</b>	
<18 years	27
18+ years	27

### Food Guide Pyramid

The best way to meet your iron needs is to eat a variety of foods as illustrated by the Food Guide Pyramid. Average selections from the Food Guide Pyramid provide about 10 milligrams of iron per day. Iron is not concentrated in many foods outside of liver and organ meats. Iron is usually associated with the more colorful foods, red meats, dark green vegetables, and the browns of whole grains. Fortified cereals and breads also are good sources of iron. Select these kinds of foods to ensure that you have an adequate intake.

Your body absorbs iron better when the iron is from plant sources or combined with foods rich in vitamin C. For example, if you eat peanut butter with a glass of orange juice, the vitamin C in the juice will increase the absorption of iron from the peanut butter. Cooking foods in cast iron pots and pans also will add iron to your diet.

Read the Nutrition Facts label, found on most packaged food products, for nutrient content. Iron and vitamin C are two of the four nutrients required on the food label.

### Bread, Cereal, Rice, and Pasta Group

Whole-grain and enriched breads and cereals provide ready amounts of iron and other nutrients. Cereal products fortified with higher amounts of iron usually cost more. Check the Nutrition Facts label to learn how much iron is in a serving.

Iron is the key to strong blood. Eating a variety of foods from the different food groups of the Food Guide Pyramid will help you reach your iron needs, as well as other nutrient needs for optimal health.

### Vegetable and Fruit Groups

Dark green, leafy vegetables, such as spinach, chard, and collard greens are good sources of iron because they tend to be low in calories and are rich in vitamins and minerals. Aim for five servings a day. Many fruits and vegetables contain vitamin C, which helps your body absorb iron.

[www.ext.vt.edu](http://www.ext.vt.edu)



Produced by Communications and Marketing, College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University, 2009

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Rick D. Rudd, Interim Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; Alma C. Hobbs, Administrator, 1890 Extension Program, Virginia State, Petersburg.



VIRGINIA STATE UNIVERSITY

## Milk, Yogurt, and Cheese Group

Although these foods and drinks are good sources of calcium, they do not supply a lot of iron. The exceptions are tofu, breast milk, and infant formulas.

## Meat, Fish, Poultry, Dried Beans, Eggs, and Nuts Group

Iron in meats, fish, and poultry is used especially well by the body. Meat, eggs, dried beans, and nuts have slightly more iron than poultry and fish. Dark meats have more iron than light meats. Liver is one concentrated source of iron. Choose lean meats to limit your intake of saturated fat.

## Fats, Oils, Sweets and Alcohol

Fats, sugars, and alcohol are high in calories, and contain mostly calories with a few other nutrients. The darker the sugar is, the higher its iron content is. Thus, black strap molasses is a fairly good source of iron. Excessive amounts could result in tooth decay.

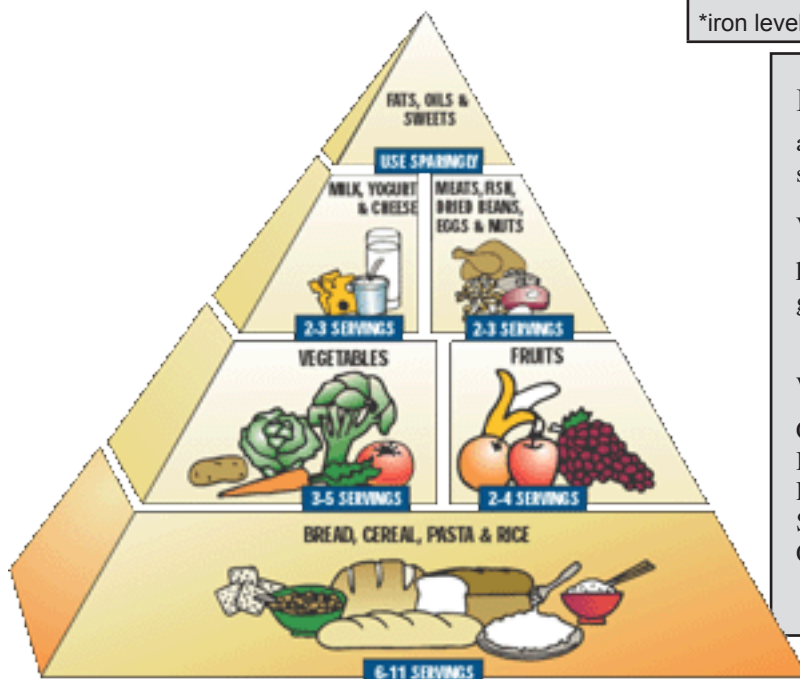
## Reference

Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc (2002).

## Examples of Iron-rich Foods

Meats and Dried Beans	mg iron
Beef (3 oz.)	2.7
Pork (3 oz.)	.9
Chicken (dark, 3 oz.)	1.4
Chicken (light, 3 oz.)	1.0
Fish (3 oz.)	1.1
Baked beans (1 cup)	5.0
Black turtle beans (boiled, 1 cup)	5.3
Lentils (boiled, 1 cup)	6.6
<b>Breads, Cereals, Grains</b>	
Whole wheat bread (1 slice)	.9
Iron fortified cereals* (3/4 cup)	4.5 - 18.0
Buttermilk biscuit (one)	1.7
Corn bread (1 piece)	1.6
Enriched pasta (1 cup)	2.2
Old-fashioned oatmeal (1/2 cup)	1.9
<b>Fruits and Vegetables</b>	
Artichoke (boiled, whole)	3.9
Peaches (dried, 10 halves)	5.3
Raisins (2/3 cup)	2.1
Soybeans (boiled, 1 cup)	8.8
Spinach (boiled, 1/2 cup)	3.2
Swiss chard (boiled, 1/2 cup)	2.0
Tomatoes (canned, 1/2 cup)	2.0

\*iron levels vary depending on product



### Fruits high in vitamin C:

apples, oranges, peaches, strawberries, tomatoes, pineapple, raspberries

### Vegetables high in vitamin C:

kale, broccoli, sweet potatoes, pepper, collard greens, potatoes

### Winning combinations:

Chicken\* with broccoli  
 Beans\* with tomatoes  
 Ham\* with sweet potatoes  
 Strawberries with oatmeal  
 Orange juice with fortified cereal

\*Substitute any meat for these options