

# IRON

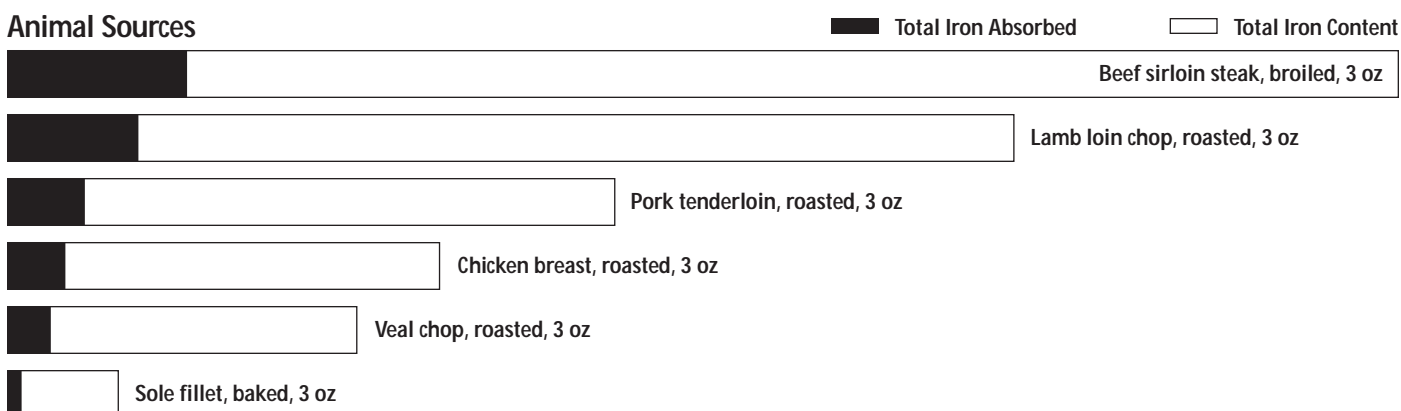
Iron is an essential mineral which plays a role in a variety of body functions. Iron's primary role is to carry oxygen and carbon dioxide within the red blood cell from one body tissue to another. Iron is also necessary for the production of energy and to support the immune system.

People with the greatest need for iron include growing children and adolescents, menstruating women and pregnant women. Iron is required for growth of new body tissue and increasing blood volume. Iron is also needed to replace blood cells lost through menstruation.

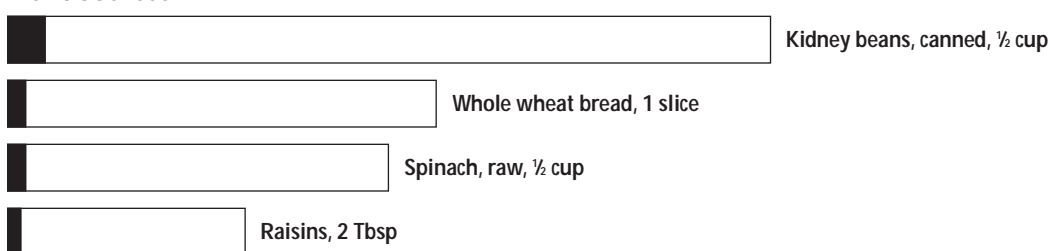
## IRON ABSORPTION IS KEY

Many foods in the diet contain iron, but this iron is not always easily absorbed by your body. The chart below shows the **total iron content** of some foods compared to the **total iron absorbed** by your body.

### Animal Sources



### Plant Sources



## TO HELP YOUR BODY ABSORB MORE IRON FROM THE FOODS YOU EAT:

- 1 Include HEME IRON Sources** (See Table 1)  
There are two types of iron in foods: heme iron and nonheme iron. Meat, poultry and fish contain heme iron which is much more easily absorbed by the body than nonheme iron, found mainly in plant foods.
- 2 Remember the MEAT FACTOR**  
Meat, poultry and fish also contain a special quality called the **Meat Factor** which helps the body absorb more nonheme iron. For example, if you eat meat and vegetables together, you absorb more iron from the vegetables than if you eat the vegetables alone.
- 3 Include Vitamin C Sources** (See Table 2)  
Foods that contain Vitamin C such as fruits and vegetables help the body absorb more nonheme iron. For example, if you eat citrus fruits along with your cereal, you will absorb more iron from the cereal than if you eat the cereal alone.
- 4 Be Alert to Iron ABSORPTION BLOCKERS**  
Some foods block the absorption of iron. Coffee and tea (both regular and decaffeinated), whole grains, bran, legumes (beans), spinach and a high fiber intake in general are a few examples of iron absorption blockers. These foods are best eaten with heme iron sources and/or Vitamin C sources to help the body absorb more iron.

## MEAL PLANNING

Two simple meal planning suggestions will help you absorb more iron from your food. First, include foods that help iron absorption (meats and vitamin C sources) when you eat foods that block iron absorption (whole grains,

bran, beans and spinach). Keep in mind, many of the foods that block iron absorption also contain iron, but your body has difficulty absorbing the iron without absorption helpers. Secondly, if you drink coffee or tea, do so between meals rather than with meals to decrease the absorption blocking effect these beverages have on other foods.

Here are a few examples of food combinations that help your body absorb more iron.

Combine **ABSORPTION HELPERS** with **ABSORPTION BLOCKERS**

Sirloin strips . . . . .	Spinach salad
Barbecued beef . . . . .	Refried beans and tortillas
Ground beef . . . . .	Whole grain roll
Pork . . . . .	Bean soup
Chicken . . . . .	Brown rice
Grapefruit . . . . .	Bran cereal
Strawberries . . . . .	Oatmeal and whole wheat toast
Orange . . . . .	Peanut butter sandwich on whole wheat

## IRON ABSORPTION HELPERS

**TABLE 1**

**Heme Iron Sources (3 oz cooked)**

		Milligrams Iron
<b>Beef</b>	Calves liver	5.3
	Sirloin	2.9
	Top round	2.4
	Ground, extra lean	2.4
<b>Pork</b>	Tenderloin	1.2
	Ham, boneless	1.2
<b>Lamb</b>	Loin	2.1
<b>Veal</b>	Loin	.7
<b>Chicken</b>	Breast	.9
<b>Fish</b>	Tuna, light meat, canned	1.3
	Flounder/sole	.2
<b>Shellfish</b>	Oysters (6)	4.8
	Shrimp	2.6

**TABLE 2**

**Vitamin C Sources**

		Milligrams Vitamin C
<b>Strawberries</b>	1 cup	82
<b>Cantaloupe</b>	1 cup, diced	66
<b>Orange</b>	1 medium	70
<b>Green Pepper</b>	½ cup, chopped	67
<b>Orange Juice</b>	½ cup	49
<b>Grapefruit</b>	½ medium	44
<b>Grapefruit Juice</b>	½ cup	42
<b>Broccoli</b>	½ cup, raw	41
<b>Cauliflower</b>	½ cup, cooked	27
<b>Tomato</b>	1 medium	23
<b>Potato</b>	Baked, 1 medium	20
<b>Cabbage</b>	½ cup, cooked	15

## HOW MUCH IRON DO YOU NEED? Recommended Dietary Allowances of Iron\*

	Age	Iron (mg)		Age	Iron (mg)
Infants	7–12 months	11	Females	14–18 years	15
Children	1–3 years	7		19–50 years	18
	4–8 years	10		51+ years	8
	9–13 years	8	pregnant		27
Males	14–18 years	11	lactation	≤ 18 years	10
	19+ years	8		19–50 years	9

\*Recommended Dietary Allowances as set by the Food and Nutrition Board of the National Academy of Sciences, 2001.