

IRON FOR YOUR HEALTH

Why do we need iron?

Iron is an important mineral for health. Iron carries oxygen throughout the body. Most of the iron in the body is found in muscles, where it helps to store oxygen for use when doing physical or mental work. Iron is also important for fighting infection. We need more iron for the growth that occurs in childhood, adolescence and pregnancy. Women need more iron than men because iron is lost each month during menstruation. Endurance athletes need extra iron because of their need for greater amounts of oxygen and the iron lost in sweat.

Without enough iron in our diets, iron deficiency can develop. A shortage of iron can:

- lead to a feeling of tiredness or low of energy
- make it hard to concentrate
- weaken the immune system (making it hard for the body to fight an infection)
- affect learning in children

In what food can I find iron?

Iron is found in many foods including meat, fish, poultry, legumes (examples: beans, peas and lentils), nuts and seeds, grain products and vegetables and fruit. In Canada and the United States, flour and other grain products, including breakfast cereals, are enriched with iron.

Meat, fish, poultry, and eggs	Plant Foods (legumes, nuts, grains, vegetables, and fruit)
Excellent sources (contain at least 3.5 mg of iron per serving)	
<ul style="list-style-type: none"> • pork, chicken or beef liver 100 g (3 oz.) • beef kidney or beef heart 100 g (3 oz.) • clams, canned 100 g (3 oz.) • oysters, canned 100 g (3 oz.) 	<ul style="list-style-type: none"> • iron-fortified breakfast cereal 250 mL (1 cup) • instant oatmeal 1 pouch • soybeans, white beans 175 mL (³/₄ cup) • tofu, firm 100 g (3 oz) • lentils 175 mL (³/₄ cup) • chickpeas 175 mL (³/₄ cup) • blackstrap molasses 15 mL (1 tbs)
Good sources (contain 2.1-3.4 mg of iron per serving)	
<ul style="list-style-type: none"> • beef 100 g (3 oz) • shrimp, canned 100 g (3 oz) • sardines, canned 100 g (3 oz) 	<ul style="list-style-type: none"> • pasta 250 mL (1 cup) • kidney, navy, pinto beans 175 mL (³/₄ cup) • baked potato with skin 1 medium • spinach, cooked 125 mL (¹/₂ cup)
Fair sources (contain 0.7-2.0 mg of iron per serving)	
<ul style="list-style-type: none"> • pork, ham, poultry or lamb 100 g (3 oz) • crab, salmon, tuna, canned 100 g (3 oz) • eggs, whole 2 large <p>Note: 100 g of meat, fish or poultry is about the size of a deck of cards</p>	<ul style="list-style-type: none"> • split peas 175 mL (³/₄ cup) • dried fruit (raisins, figs, dates) 60 mL (¹/₄ cup) • almonds, cashews, mixed nuts 60 mL (¹/₄ cup)

Source: *Nutrient Value of Some Common Foods. Health Canada, 1999*

How does iron get absorbed?

Only some of the iron in the foods we eat is absorbed. The iron in meat, fish and poultry is absorbed best. The iron in plant foods is not absorbed as well. Whole grains, legumes and vegetables contain substances that limit the amount of iron absorbed. Even though these foods are high in fibre, people with low iron should try to eat these foods at different times than foods that are high in iron until iron

stores return to normal. Also, coffee, tea, cocoa and red wine contain substances that limit the iron absorbed from foods. Combining some foods can improve iron absorption. Eating foods containing vitamin C with foods high in iron helps to absorb iron.

What are some food sources of vitamin C?

Vegetables	Fruits	
<ul style="list-style-type: none"> • Tomatoes • Broccoli • Green or red pepper • Cabbage • Brussels sprouts • Potatoes cooked in their skin 	<ul style="list-style-type: none"> • Oranges • Lemons • Grapefruit • Most berries 	<ul style="list-style-type: none"> • Honeydew • Kiwi fruit • Pineapple • mango

What are the daily Iron requirements?

Age/Life Stage	Iron (mg/day)		Age/Life Stage	Iron (mg/day)	
	Females	Males		Females	Males
0 to 6 months	0.27	0.27	Pregnancy under 19 years 19 years and older	27	n/a
7 to 12 months	11	11			
1 to 3 years	7	7			
4 to 8 years	10	10			
9 to 13 years	8	8	Vegetarians 14 to 18 years 19 to 50 years over 50 years	26	20
14 to 18 years	15	11			
19 to 50 years	18	8			
Over 50 years	8	8			
				27	n/a
				33	14
				15	14

Source: Dietary Reference Intakes, National Academy of Sciences (2001)

Do babies need extra iron?

Most full-term babies are born with iron stores in their bodies. If fed only breast milk, they will meet their iron needs for about the first six months of life. Although breast milk is low in iron, it is well absorbed by babies. Continued breastfeeding for up to two years of age and beyond, and adding solid foods high in iron at six months of age is healthiest for babies.

Babies who are formula fed should receive iron-fortified commercial formula until 9 to 12 months of age. Iron-fortified commercial formula will provide enough iron to meet babies' daily iron needs.

From six months of age and older, iron-rich foods should be offered to babies everyday. Iron is needed for babies' growth and development and to prevent anemia. Iron-fortified baby cereals, meats (examples beef, pork, lamb and veal), poultry, fish, tofu, beans and other legumes and egg yolks are good sources of iron. Eating foods containing vitamin C with foods high in iron helps babies to absorb iron. Most vegetables and fruit contain vitamin C, and add variety to babies' diet.

Do vegetarians need extra iron?

People who eat a plant-based diet may have trouble meeting their iron needs. Vegetarians who are growing (examples: babies, children, adolescents and pregnant women) need more iron and may find it hard to meet their iron needs.

Vegetarians are advised to:

- carefully plan meals and snacks to include a variety of iron-rich foods
- ask their doctor or a dietician about taking an iron supplement

What are some Iron supplements?

For people with normal iron stores, taking iron supplements is not advised. Too much iron in your body can be harmful, especially to children. Always keep iron supplements or multivitamins with iron out of children's reach.

Iron supplements may be recommended for people with:

- low iron stores or anemia
- certain illnesses
- low amounts of iron in their diet, such as vegetarians
- high iron needs (examples: pregnant women or some menstruating women and endurance athletes)

These people may need to take iron supplements as advised by their doctor--there are no risks to these people if they take iron supplements.

Can too much Iron be harmful?

The body stores iron very efficiently and too much iron can be toxic. Haemochromatosis is a condition characterised by excessive iron stores. Some studies suggest that haemochromatosis increases the risk of heart disease and some cancers, such as colorectal cancer. Treatment includes limiting the amount of iron in the diet and regularly removing blood until iron levels normalise. (Source: Canadian Haemochromatosis society, www.cdnhemochromatosis.ca)

To learn more, contact your doctor or speak to a nurse 24 hours a day, seven days a week by calling: Alberta Health Link toll free at 1-866-408-LINK (5465). Mandarin Health Link Calgary at 403-943-1554, Cantonese Health Link Calgary at 403-943-1556

If you want to read any of the previous ‘Road To Healthy Living’ series articles, please go to http://www.calgaryhealthregion.ca/programs/diversity/multilingual_health_services.htm and get health information in your own language