

Table of Iron Containing Foods:

Food, Standard Amount	Iron (mg)	Calories
Clams, canned, drained, 3 oz.	23.8	126
Fortified ready-to-eat cereals (various), 1 oz.	1.8-21.1	54-127
Oysters, eastern, wild, cooked, moist heat, 3 oz.	10.2	116
Organ meats (liver, giblets), various, cooked, 3 oz.	5.2-9.9	134-235
Fortified instant cooked cereals (various), 1 packet	4.9-8.1	Varies
Soybeans, mature, cooked, 1/2 cup	4.4	149
Pumpkin and squash seed kernels, roasted, 1 oz.	4.2	148
White beans, canned, 1/2 cup	3.9	153
Blackstrap molasses, 1 Tbsp.	3.5	47
Lentils, cooked, 1/2 cup	3.3	115
Spinach, cooked from fresh, 1/2 cup	3.2	21
Beef, chuck, blade roast, lean, cooked, 3 oz.	3.1	215
Beef, bottom round, lean, 0" fat, all grades, cooked, 3 oz.	2.8	182
Kidney beans, cooked, 1/2 cup	2.6	112
Sardines, canned in oil, drained, 3 oz.	2.5	177
Beef, rib, lean, 1/4" fat, all grades, 3 oz.	2.4	195
Chickpeas, cooked, 1/2 cup	2.4	134
Duck, meat only, roasted, 3 oz.	2.3	171
Lamb, shoulder, arm, lean, 1/4" fat, choice, cooked, 3 oz.	2.3	237
Prune juice, 3/4 cup	2.3	136
Shrimp, canned, 3 oz.	2.3	102
Cowpeas, cooked, 1/2 cup	2.2	100
Ground beef, 15% fat, cooked, 3 oz.	2.2	212
Tomato puree, 1/2 cup	2.2	48
Lima beans, cooked, 1/2 cup	2.2	108
Soybeans, green, cooked, 1/2 cup	2.2	127
Navy beans, cooked, 1/2 cup	2.1	127
Refried beans, 1/2 cup	2.1	118
Beef, top sirloin, lean, 0" fat, all grades, cooked, 3 oz.	2.0	156
Tomato paste, 1/4 cup	2.0	54
*Limit portions or how often you eat the high iron foods listed toward the top of the table.		

Leading a normal and healthy lifestyle

You don't have to cut out all iron-containing foods. Choosing a varied diet will allow you to feel your best. For more information on iron overload, visit the following resources.

Sources:

"Iron Overload and Hemochromatosis." Centers for Disease Control and Prevention. 24 Aug 2006 Division of Hereditary Blood Disorders. 21 Sept 2007 <<http://www.cdc.gov/ncbddd/hemochromatosis/>>.

"Acquired Iron Overload." Iron Disorders Institute. 03 Nov. 2006. Iron Disorders Institute . 21 Sept 2007 <<http://www.irondisorders.org/Disorders/Acquired.asp>>.

"Food Sources of Iron." Hopkins Technology. 2007. 21 Sept 2007 <<http://www.hoptechno.com/bookfoodsourceFE.htm>>.

To obtain Apple-A-Day pamphlets on other health topics, call University of Nevada Cooperative Extension:

Reno – (775) 784-4848
Las Vegas – (702) 222-3130

Visit our website at www.unce.unr.edu

Prepared by: Kerry Seymour, M.S., R.D., C.D.E., Nutrition Specialist, University of Nevada Cooperative Extension; Korrie Vance, B.S.

Copyright © 2008, University of Nevada Cooperative Extension

The University of Nevada, Reno is an equal opportunity/affirmative action employer and does not discriminate on the basis of race, color, religion, sex, age, creed, national origin, veteran status, physical and mental disability and in accordance with university policy, sexual orientation, in any program or activity it operates. The University of Nevada employs only United States citizens and aliens lawfully authorized to work in the United States.



**AN APPLE
A DAY**

Hemochromatosis (Iron Overload)

Recommended Guidelines



Fact Sheet #08-30

Prepared by University of Nevada Cooperative Extension and the University of Nevada School of Medicine.

What is Hemochromatosis?

The blood disorder hemochromatosis is one of the most common inherited diseases in the United States. It affects one in every 200-300 people. Hereditary hemochromatosis causes iron to be stored and to build up in the body. This can cause a dangerous iron overload.

Why do I need Iron?

Iron is a mineral needed for healthy blood and overall good health. Indeed iron is needed for the human body to stay alive. You need iron to carry oxygen from your lungs to all parts of your body. Having just enough iron prevents iron-deficiency anemia, which can make one look pale and feel tired, short of breath, and weak.

What happens when my body has too much iron?

Iron toxicity occurs when there is too much iron in the body's cells. High blood levels of iron injure cells in the heart, liver, pancreas and elsewhere. This can cause severe problems, including organ damage, diabetes (resulting from injury to the pancreas) and even death in some cases.

What else causes iron overload?

Taking iron supplements when not needed raises the risk of iron overload. Iron toxicity is sometimes found in children who accidentally get into the iron supplement bottle. Heavy regular alcohol use can contribute to iron overload, as alcohol increases iron absorption. Others who may be at risk include those who

often eat unusually large amounts of red meat. This is because red meat contains high levels of easily absorbable or "bio-available" iron.

What are the foods high in iron to be avoided?

The most bio-available iron is found in animal protein. The highest amounts are in organ meats, red meat - which includes pork, beef, and lamb - and shellfish. When you have iron overload, choose lower iron options, such as chicken and fish, more often. Decreasing the portion size of high iron meats will also limit iron. Plant foods also contain iron, but it is less well absorbed.

Can I get too much iron if I don't eat much meat?

Yes, taking iron supplements or multivitamins with added iron when you don't need to do so can lead to iron overload. High dosage Vitamin C (500 milligrams or higher) increases iron absorption and can worsen the problem.

In this day and age, many foods naturally low in iron (like breads and cereals) may be "iron fortified" in processing. Read the "Nutrition Facts" label and choose brands lower in iron. Heavy alcohol use may also add to the iron overload problem. Regular use of cast iron cookware adds available iron to the food cooked in it, especially acidic foods simmered for a long time.

Are there foods that block iron absorption?

Yes, there are some food components that block iron absorption somewhat. The tannins in tea and phytic acid in wheat bran and flax meal have that effect. Drinking tea with meals and eating these phytic acid-containing foods regularly may be helpful.

Recommended guidelines...

- ✓ Follow your doctor's advice about the need for bloodletting or phlebotomy. Trying to control iron overload with diet alone may be dangerous when you have hemochromatosis.
- ✓ Avoid iron, multivitamins with iron and Vitamin C supplements.
- ✓ Limit alcohol intake. Avoid alcohol entirely if you have liver damage.
- ✓ Limit portion size and how often you eat organ meats, red meat and shellfish.
- ✓ Avoid cereals with high levels of added iron. Choose those with wheat bran.
- ✓ Drink tea with meals. Add wheat bran or flax meal to baked goods.
- ✓ Eat plenty of fruits and vegetables. They contain antioxidants which help protect your cells from being damaged by the excess iron.
- ✓ Avoid raw fish and shellfish, and follow safe food handling rules. Having hemochromatosis puts one at greater risk for bacterial infections of the blood.

Recommended Dietary Allowances (RDA) for Iron:

Age	Males (mg/day)	Females (mg/day)	Pregnancy (mg/day)	Lactation (mg/day)
0 to 6 months	.27	.27	N/A	N/A
7 to 12 months	11	11	N/A	N/A
1 to 3 years	7	7	N/A	N/A
4 to 8 years	10	10	N/A	N/A
9 to 13 years	8	8	N/A	N/A
14 to 18 years	11	15	27	10
19 to 50 years	8	18	27	9
51 + years	8	8	N/A	N/A

*National Institutes of Health: Office of Dietary Supplements