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Recommendations

Diet

FOR: People with Type I hemochromatosis

Type I hemochromatosis (also called classic hemochromatosis) is an inherited disorder of iron metabolism. People with Type I hemochromatosis absorb more iron from the diet than do people with normal iron metabolism.

Type I hemochromatosis is an adult-onset condition. Though symptoms or abnormal iron tests can be present in teens, usually the first signs occur in 30- to 40-year-old males and in non-menstruating females.

If not treated, iron may continue to build up in the body to toxic levels. Eventually iron-loaded organs such as the heart, liver, pancreas, pituitary and joints cannot function properly. Conditions such as heart failure, cirrhosis, cancer, diabetes, impotence, infertility, depression, arthritis and hypothyroidism can develop.

See recommendations sheets for diagnosing and treatment guidelines and details about inheritance patterns and DNA testing for hemochromatosis.

- **Cut back on consumption of red meat**
Why: red meat contains the most easily absorbable form of iron called heme iron.
- **Avoid foods high in animal fats**
Why: fats and iron together can generate free radical activity which is destructive to cells and can damage DNA.
- **Take vitamin C supplements in between meals**
Why: vitamin C enhances the absorption of iron
- **Cook in ceramic or glassware when possible**
Why: iron filings from grills or metal skillets can get into the food.
- **Drink alcoholic beverages in moderation**
Why: Alcohol enhances the absorption of iron.
Too much alcohol can damage the liver.
Red wine can be of benefit when consumed in moderation.
People with cirrhosis should avoid alcohol completely.
- **Avoid sugary foods or beverages.**
Why: sugar enhances the absorption of iron.
- **Eat lots of fruits and vegetables**
Why: These foods contain fiber and antioxidants, which inhibit free radical production.
NOTE: Fruits and vegetables contain non-heme iron which is not easily absorbed. Also, absorption of non-heme iron can be further impaired when consumed with tea, coffee, eggs, fiber or supplemental calcium.
- **Eat nuts, grains, rice and beans**
Why: These foods are high in fiber and contain non-heme iron.
- **Avoid raw shellfish**
Why: Shellfish contain a bacterium called *Vibrio vulnificus*, which can be fatal to people with high body iron levels. Also, take care when walking barefoot on beaches where you might step on contaminated shells.
- **Drink tea or coffee with meals when possible (not recommended for people with liver damage).**
Why: these beverages contain tannins which inhibit the absorption of iron.

For the iron content in different kinds of meat and common foods: see back

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IRON	per 3.2 oz serving MEAT		
	total iron MILLIGRAMS	heme iron percentage of total iron	heme iron MILLIGRAMS
VENISON	4.5	51	2.3
LAMB	3.1	55	1.7
BEEF			
RUMP STEAK	2.9	52	1.5
SIRLOIN STEAK	2.5	52	1.3
ROUND STEAK	3.2	50	1.6
TOP ROUND	2.5	48	1.2
GROUND	2.5	40	1.0
BRISKET	2.0	25	0.5
VEAL	1.9	40*	0.7*
PORK	1.3	23	0.3
PROCESSED MEATS			
SAUSAGE (VEAL)	0.7	40*	0.2*
BOILED HAM	0.7	40*	0.2*
LIVER PATE	5.0	16	0.8
CHICKEN	0.6	40*	0.2*
FISH			
COD	0.2	0.0	0.0
MACKEREL	0.7	0.0	0.0
SALMON	0.6	17	0.1
MUSSELS	4.6	48	2.2
LOBSTER	1.6	40*	0.6*
SHRIMP	2.6	40*	1.0*

* resources vary

Meat contains about 48-59% heme iron; the balance is non-heme. The iron in plant-based foods is nearly all non-heme, but some plants do have insignificant traces of heme iron. These plants are not commonly consumed by humans.



CR Hume is the Iron Disorders Institute mascot who helps to raise awareness about the benefits of blood donation.

Donate blood!

Remember: iron cannot be removed except through blood loss or iron-chelation drugs administered by a health care professional.

Don't believe health food claims that tell you otherwise!

Keep your physician informed!

Control Iron Absorption As easy as



- A. Cut back on red meat
- B. Include items that inhibit the absorption of iron such as tea, coffee or milk.
- C. Avoid items that increase the absorption of iron such as: sugars, ascorbic or citric acid, alcohol

Remember don't overdo it! Patients with iron overload do not need to be extreme with the diet. They should keep good records, check iron levels every 6 months and keep donating blood!

Iron Content: Plant-based Foods

Meat substitute:

Tofu, firm 1/4 block....8.5mgs

Nuts, grains, and seeds:

mgs per 1-cup portion
cream of wheat 10

almonds 6.7

cashews 5.3

pistachios 8.7

pumpkin seeds 15.7

sunflower seeds 10.3

rice (white or wild) 6.8

flours & bran:

 rice bran 16.9

 rice flour 6.8

dried fruits: 10 pieces:

 peaches 5.2

 pear 3.7

 prunes 3.0

 raisins 4.0

beans, peas and lentils:

 Split peas 3.4

 Black beans 15.0

 Pintos 12.2

Vegetables:

You need not cut back on vegetables, including spinach. Fruits and vegetables contain a type of iron that is not easily absorbed by the body. In fact, some fruits and vegetables such as raisins and eggplant are high in polyphenols, substances that inhibit the absorption of non-heme iron.

Eggs can also be enjoyed. Though there is about a milligram of iron in a large egg, eggs also contain a protein that inhibits the absorption of iron. This inhibiting action is called the "egg factor."

