



CAPE COD HEALTHCARE

Nicholas G. Xiarhos Blood Donor Center

Iron and blood donation: What you need to know

When you arrive to a blood donation appointment, a hemoglobin screening test is administered. A test using an OrSense monitor, a non-invasive, ring-style monitor, is performed to be sure you can donate. Hemoglobin is an iron-containing protein that carries red blood cells, which in turn carry oxygen, throughout the body. This simple test determines whether hemoglobin levels are appropriate for you to donate.

Though three-quarters or more of total body iron is normally in your red blood cells, you may have enough hemoglobin to donate even if other body iron stores are low. But when these stores are very low, hemoglobin can fall below normal levels, a condition called anemia, which is common and easily treated.

Body iron stores are used for growth, to support pregnancy, and to replace lost red blood cells, including those lost through blood donation. You can gradually replenish those stores with the iron in a healthy diet or with supplements.

Why is my hemoglobin checked prior to donation?

We measure your hemoglobin to make sure that giving blood will not reduce your hemoglobin to unsafe levels. Your hemoglobin level must be at least 12.5 grams per deciliter if you are female or 13.0 grams per deciliter if you are male. A hemoglobin less than the level required for donation does not necessarily mean that you have a disease, or your result is clinically abnormal. The hemoglobin value that we measured today may be perfectly normal for you, even though the regulations say that it is too low to be a blood donor today. We recommend waiting 14 days before trying again.

How much iron do I need?

Gender, age, genetics, and other sources of blood loss determine individual needs. While eating a well-balanced diet is important for all donors, simply eating iron-rich foods may not replace all the iron lost from blood donation. Taking multivitamins with iron or iron supplements either prescribed or over the counter may help replace iron lost. It is recommended that you talk to your health care provider before you start to take supplements. Your health care provider will be able to inform you what iron supplements may be appropriate for you. Some people with iron overload syndromes like hereditary hemochromatosis should not take iron supplements.

Does the blood center test for low iron stores in my body?

No. The blood center tests your hemoglobin, not your iron stores. As hemoglobin is a poor predictor of iron stores, you may have a normal amount of hemoglobin and be allowed to donate blood even though your body's iron stores are low. If you have any concerns about your iron level your health care provider can check your iron level.

Why doesn't a single big dose of iron replace what I lose during the donation?

People have a limit to how much iron they can absorb at a given time (i.e., 2-4 mg/day). Taking iron in larger doses for a shorter period may not lead to better absorption and may result in more side effects. The overall goal is to replace, over 1 to 3 months, 200 - 250 mg of iron lost during donation.

Another option is to increase intervals between donations or to limit the number of annual donations.



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Boost iron through good nutrition

Consuming foods high in iron are an easy way to maintain iron stores in the body. Additionally, vitamin C-rich food helps increase iron absorption when consumed at the same time as iron-rich food.

Note: Dairy foods, caffeine, and antacid medications hinder the absorption of iron. Do not consume these one hour before or after the ingestion of high iron foods for best iron absorption.

Foods rich in iron

Group I	Group II	Group III
Meats: Beef, Hearts, Liver, Lamb, Pork, Tongue, & Veal Seafood: Clams, Cod, Haddock, Halibut, Oysters, Sardines, Salmon, Scallops, Shrimp, & Tuna Poultry: Turkey, Chicken, & Eggs	Veggies: Broccoli, Chard, Brussel Sprouts, Kale, & Spinach Fruits & Nuts: Almonds, Apples, Apricots, Coconuts, Dates, Figs, Peanuts, Prunes, Raisins, & Strawberries Beans: Black-Eyed Peas, Chick Peas, Kidney, Navy, Lentils, Lima, & Soy Beans	Breads & Cereals: Enriched White Bread, Whole Wheat Bread, Rye Bread, Wheat Products, Bran Cereal, & Oat Cereal Grains: Rye, Cornmeal, Oats, Wild Rice, Buckwheat, Barley, Wheat Germ, & Quinoa