

Iron Deficiency and Maintaining Iron Balance Prepared*

Thank you for donating blood.

St. Luke's Blood Center cares about your health. And, we want you to be an informed donor. Donating blood reduces iron stores in the body and for many people; this has no effect on their health. However, in some people, particularly younger women and frequent donors of either gender, blood donation may remove most of the body's iron stores.

What happens during a blood donation?

Red blood cells are red because of the way iron is carried in hemoglobin—a protein that brings oxygen to the body. Therefore, the removal of red blood cells during blood donation also removes iron from your body. The impact of this iron loss varies among donors.

How does blood donation affect iron stored in my body?

Iron is needed to make new red blood cells to replace those you lose from donation. To make new red blood cells, your body either uses iron already stored in your body or uses iron that is in food you eat. Many women have only a small amount of iron stored in their body, which is not enough to replace the red blood cells lost from even a single donation. Men have more iron stored in their body. However, men who donate blood often (more than two times per year) may also have low iron stores.

Does the Blood Center test for low iron stores in the body?

No, the Blood Center tests your hemoglobin, but not your iron stores. Hemoglobin is a very 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.**

How may low iron stores affect me?

There are several possible symptoms associated with low iron stores. These include fatigue, decreased exercise capacity and pica (a craving to chew things, such as ice or chalk). In addition, having low iron stores may increase the possibility of having a low hemoglobin test, preventing blood donation.

What can I do to maintain my iron stores?

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 (from a drugstore) may help replace iron lost. Iron supplements vary in name and proportion of iron within the tablet/caplet. The most effective dose, type of iron supplement, and length of treatment are currently being studied. Current recommendations range from a typical multivitamin with iron (19 mg iron) to elemental iron caplets (45 mg iron) for six weeks to three months. Your physician or pharmacist may be able to assist you in deciding what dose, type, and duration of iron supplement to choose.

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

The average person has a limit in iron absorption (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 one to three months, 200-250 mg of iron lost during donation.

What is anemia?

Anemia is a decrease in the number of red blood cells (RBC's) or hemoglobin, resulting in a lower ability for the blood to carry oxygen to body tissues. St. Luke's Blood Center encourages you to speak to your personal healthcare provider regarding anemia. Visit anemia.org for more information.

Where can I get additional information about donating?

For more information on becoming a blood donor, visit **aabb.org**.

*** ABB Interorganizational Task Force on Donor Hemoglobin Deferrals**