Information on Iron Deficiency and Maintaining Iron Balance before Donating Blood

Information from the AABB Interorganizational Task Force on Donor Hemoglobin Deferrals

Thank you for coming to donate blood. We care about your health and want you to know that donating blood reduces iron stores in your body. In many people, this has no effect on their health. However, in some people, especially younger women and frequent donors of either gender, blood donation may remove most of the body's iron stores. We want you to understand these issues more clearly.

What happens to me 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. Removing red blood cells during blood donation also removes iron from your body. The impact of this iron loss on your health 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 donating blood. To do this, your body either uses iron already stored in your body or uses iron that is in the 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 blood donation. Men have more iron stored in their body. However, men who donate blood often (more than twice a year) may also have low iron stores.

Does the blood center test for low iron stores in my 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**.

Are certain groups at greater risk of iron deficiency? All donors lose iron from blood donation. In some donors, these iron levels drop below what is considered normal. Teenage donors, premenopausal women, frequent donors , and donors with hemoglobin or hematocrit levels at or below the minimum may be at a higher risk for losing iron, to below normal levels, from blood donation.

How might low iron stores affect me? Several possible symptoms are associated with low iron stores. These include fatigue, decreased exercise capacity, and pica (a craving to chew things such as ice or chalk). Having low iron stores may increase the possibility of having a low hemoglobin test, which prevents blood donation.

What can I do to maintain my iron stores? While eating a well-balanced diet is important for all blood donors, simply eating iron-rich foods ***might 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 lost iron. Iron supplements vary in name and proportion of iron within the tablet or caplet. The most effective dose, type of iron supplement, and length of treatment are currently being studied. Current recommendations range from one typical multivitamin with iron (19 mg iron) to elemental iron caplets (45 mg iron) for six weeks to three months. Your doctor or pharmacist may be able to help you decide 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? People are only able to absorb 2 to 4 mg of iron per day. So, 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 the 200-250 mg of iron lost during donation over 1 to 3 months.

Where can I get more information? Your health care provider can advise you about your health and iron deficiency. In addition, several websites offer helpful information including webmd.com, anemia.org, and hematology.org. To schedule an appointment at University of Iowa Hospitals & Clinics, call 319-356-1616.

If you would like a complimentary bottle of multivitamins containing iron, talk to a DeGowin staff member today!

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