

The Surprising Benefits of Donating Blood

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Abstract

- * Blood donation is good but multiple a year might increase CVD.
- * In theory, you can do 6 times a year but in reality, restrict it to 1 or 2.

Keywords: hereditary hemochromatosis, perfluoroalkyl, polyfluoroalkyl, PFASs, anemia, Apheresis, Platelet, plateletpheresis, Plasma, plasmapheresis, [menopause](#), oral iron supplement, malaria-risk, cardiovascular disease (CVD), multiple time donors (MTD), single time donors (STD), levels of triglycerides (TG), low-density lipoproteins (VLDL), Iron level, hemoglobin levels, serum levels of lipids

Amid a worsening blood shortage, NewYork-Presbyterian experts explain how donating blood not only helps someone in need, but also offers health benefits for the donors themselves.

Before you are allowed to donate, your vital signs will be checked to make sure you are fit enough for the procedure. This exam might turn up a condition that needs medical attention, such as high blood pressure or a heart arrhythmia like atrial fibrillation. In addition, you'll be screened for infectious diseases you may be unaware of. "If we detect an issue with your vital signs or another health issue, we would direct you to go to a physician at that point to be checked," Dr. DeSimone says.

The health screening will also reveal if you have a rare blood type. This information can be useful if you ever face surgery or another medical situation in which a transfusion may be required. Plus, you'll have the satisfaction of knowing your donation is particularly needed.

A Healthier Heart and Vascular System

Regular blood donation is linked to lower [blood pressure](#) and a lower risk for heart attacks. "It definitely helps to reduce cardiovascular risk factors," says Dr. DeSimone.

People with a condition called hereditary [hemochromatosis](#) must have blood removed regularly to prevent the buildup of iron. Fortunately, this blood can benefit others.

"People with hereditary hemochromatosis are essentially healthy and are otherwise normal, but they have a gene mutation where they make too much blood," Dr. Stone says. "So, we can use their healthy blood to help patients who need it."

A Happier, Longer Life

People usually donate because it feels good to help others, and altruism and volunteering have been linked to positive health outcomes, including a lower risk for depression and greater longevity.

Added Bonus: A Free Snack

“Every time you donate blood, it’s like burning calories without doing anything, as your body burns **500 calories** to replace the blood that was removed,” says Dr. Stone. “And you get to have juice and snacks immediately afterwards, so it’s pretty great.”

Blood Donation Tips

If you plan to give blood, follow these steps:

- **Drink plenty of water.** Staying hydrated makes it easier to find your veins and helps prevent you from becoming light-headed after donating. Dr. Stone recommends planning a couple of days in advance. “Make sure you’re well hydrated and avoid drinking a lot of alcohol the day or two before donating.”
- **Eat well beforehand.** Don’t skip breakfast and be sure to eat snacks offered to you after you donate. “Make sure that you eat at least one balanced meal before donating. If you’ve eaten enough and had enough fluids to drink the day you donate, you’ll be much less likely to have a donor reaction — like feeling dizzy — during or after donation,” Dr. Stone says.
- **Exercise before donating blood, not afterward.** It’s OK to go to the gym before you donate blood but not so wise afterward. “You might feel tired or dizzy, so take it easy for the rest of the day and minimize physical activity,” says Dr. Stone.
- **Take iron tablets.** The American Red Cross recommends that individuals who donate blood frequently take an iron supplement or a multivitamin with iron. “More and more, we’re recommending that teenage donors in particular take iron, because it’s been shown that teenage donors may become iron deficient after blood donation,” Dr. DeSimone says.

Your Wallet Will Feel Fuller

Many blood donation centers offer financial compensation for donating. Donors can expect to earn around \$50 for blood, plasma, and serum.⁶ And that number can go up substantially if you have certain medical conditions. For example, some centers pay people with Lupus up to \$500 per week for donating plasma.⁷ Check with your local donor center about the donation programs you’re eligible for.

And remember those referral programs we mentioned? They usually offer a bonus for everyone you bring in to donate.

You May Reduce Your Cancer Risk

A study published in the Journal of the National Cancer Institute found that donating blood may reduce the amount of iron people have in their bodies. You need iron to live, but too much can increase your chances of getting cancer. The study found that frequent blood donors had lower risks of liver, lung, colon, stomach, and throat cancer.⁸

It's important to note that these findings don't apply to everyone. Patients should check with a doctor about their iron levels and donating blood.

You May Be Able to Keep Your Iron Levels in Check

Adults usually have about 3 to 4 grams of iron in their bodies, mostly in red blood cells but also in bone marrow. Iron is needed for growth, development, and transportation of oxygen to different parts of the body. But having too little or too much iron in your blood can be harmful for your health.

Giving blood frequently is one thing that can lower the amount of iron in your body. Lowering high iron levels can be a good thing as long as they don't go too low.

You might also gain an additional heart health benefit from a decrease in iron levels after blood donations. One study noted that decreased iron levels have been associated with a lowered risk of [heart disease](#).

When you donate a unit of blood, you lose about a quarter of a gram of iron, which gets replenished from the food you eat in the weeks after donation, Dr. DeChristopher said.

Your Body May Lessen Some Types of Chemicals in Your Blood

The body can detoxify itself naturally (e.g., with help from your liver), but giving blood may help your body's detoxing potential. For example, blood (and plasma) donations have been shown to have an effect on the levels of perfluoroalkyl and polyfluoroalkyl substances (PFASs).

What Are PFASs?

PFASs are chemical compounds found in consumer and industrial products (e.g., grease-resistant paper, fire extinguishing foam). These chemicals take a long time to break down and can cause a number of issues, including:⁸

- Reproductive problems
- Decreased immune system responses
- Developmental delays
- Increased risk of some cancers and obesity

Situations That Can Prevent You From Giving Blood Initially or at All

One condition that may prevent you from giving blood is anemia. Anemia is when your body lacks red blood cells or hemoglobin, and it affects up to one-third of the world's population.¹⁰ Anemia is most commonly due to an [iron deficiency](#). You should not donate blood if you have anemia.

People who haven't hit [menopause](#) yet may also find it hard to donate blood. "Pre-menopausal females can be somewhat iron depleted with blood counts just under the lower limit," Dr. DeChristopher explained. If you have low iron and you still want to be a donor, taking an oral iron supplement may help you re-qualify, Dr. DeChristopher added.

There are other circumstances where you may not be able to give blood. Other than being sick or having low iron, the American Red Cross mentioned that having traveled to or lived in a malaria-risk country can move your chances of giving blood to a later time.¹¹

Additionally, there may be waiting periods after taking medications (for example, antibiotics or blood thinners) or getting vaccinations (like for chickenpox or measles, mumps, and rubella) before you can give blood

There's a Limit to How Often You Can Donate

One other thing to note is how often you donate blood. Giving blood too regularly can actually lead to iron deficiency.

However, you are able to donate as often as:¹³

- Every 56 days, up to six times per year, if you are donating whole blood
- Every seven days, up to 24 times per year, if you are donating platelets
- Every 112 days, up to three times per year, if you are making a Power Red donation (when a machine is used so that you can donate two units of red blood cells safely)

Free health checkup

They'll check your:

- pulse
- blood pressure
- body temperature
- hemoglobin levels

Your blood is also tested for several diseases. These include:

- [hepatitis B](#)
- [hepatitis C](#)
- [HIV](#)
- [West Nile virus](#)
- [syphilis](#)
- [Trypanosoma cruzi](#)

Procedure

For a whole blood donation procedure:

1. You'll be seated in a reclining chair. You can donate blood either sitting or lying down.
2. A small area of your arm will be cleaned. A sterile needle will then be inserted.
3. You'll remain seated or lying down while a pint of your blood is drawn. This takes 8 to 10 minutes.
4. When a pint of blood has been collected, a staff member will remove the needle and bandage your arm.
5. The person will donate one unit of blood, and this will take 6–10 minutes. The whole process will take around 45–60 minutes.
6. After the donation, a healthcare provider will apply pressure with cotton gauze and place a dressing over the donor's arm.

The donor will usually need to wait for 10–15 minutes before leaving, during which time they will receive some refreshments.

If the needle prick is bleeding after donation, the donor should apply pressure and raise the arm for 3–5 minutes.

If there is bruising or bleeding under the skin, they can apply a cold pack intermittently for 24 hours, then alternate with warm packs.

7.

Other types of donation include:

- platelet donation (plateletpheresis)
- [plasma donation](#) (plasmapheresis)
- double red cell donation

What to know before you donate

Here are some important things to know before you donate:

- You need to be 17 or older to donate whole blood. [Some states](#) allow you to donate at 16 with parental consent.
- You have to weigh at least 110 pounds and be in good health to donate.
- You need to provide information about medical conditions and any medications you're taking. These may affect your eligibility to donate blood.
- You must wait at least 8 weeks between whole blood donations and 16 weeks between double red cell donations.
- Platelet donations can be made every 7 days, up to 24 times per year.

The following are some suggestions to help you prepare for donating blood:

- Drink an extra 16 ounces of water before your appointment.

- Eat a healthy meal that's low in fat.
- Wear a short-sleeved shirt or a shirt with sleeves that are easy to roll up.

Iron Level

Foods that can boost a person's iron intake include:

- red meat
- spinach
- iron-fortified juices and cereals

Ref

<https://healthmatters.nyp.org/the-surprising-benefits-of-donating-blood/>

<https://www.health.com/mind-body/4-unexpected-benefits-of-donating-blood>

Other factors that need to be noted

Conclusion: We demonstrate that multiple blood donation is associated with an unfavorable modulation of serum levels of lipids that is influenced by donation extent. This modulation is not associated with an increased risk of CVD but may weakly contribute in a higher risk for coronary heart disease (CHD).

Ref

<https://pubmed.ncbi.nlm.nih.gov/28797569/>

<https://www.health.com/mind-body/4-unexpected-benefits-of-donating-blood>