

6 ADVANTAGES OF BLOOD DONATION

EACH DAY, THOUSANDS OF PEOPLE NEED DONATED BLOOD AND BLOOD PRODUCTS



JANUARY 2023



IF AN INDIVIDUAL'S BLOOD LEVELS FALL AS A RESULT OF AN ACCIDENT OR ILLNESS, OR IF THEIR BLOOD IS NOT FUNCTIONING PROPERLY, THERE WILL NOT BE ENOUGH OXYGEN OR OTHER NUTRIENTS TO MAINTAIN THEIR VITAL ORGANS

Donating whole blood can help these people.

A similar process to whole blood donation is apheresis. This will provide other blood components, such as platelets. A donation of platelets can help people who have issues related to clotting. It may also provide antibodies to help fight a disease, such as COVID-19.

Giving blood can be a lifesaving action, but it may also have benefits for the donor. In this article, learn about the effects of giving blood.

Advantages of Blood Donation

Donating blood can help others with health needs.

Donating blood can help people with many health conditions, such as *those who*:

- have internal or external bleeding due to an injury

- have sickle cell disease or another illness that affects the blood
- are undergoing *cancer* treatment
- are undergoing surgery, similarly as cardiovascular or orthopedic surgery
- have an inherited blood disorder
- are undergoing a transplant
- need treatments involving blood products or plasma

■ COVID-19

People who have recovered from COVID-19 may be able to help others with the disease by donating blood plasma, this is according to the [*Food and Drug Administration \(FDA\)*](#).

Their plasma might have antibodies to the infection. If another person receives this plasma, it may help their body fight the COVID-19 virus.

Benefits for the Donor

For many people, blood donation offers many health benefits with few risks. There are stringent regulations for blood banks which means that a donor can give their blood or plasma safely in the United States.

Donated blood can save the lives of people in need. However, according to some medical professionals, it may also benefit the donor.

The sections below will look at some benefits for the donor in more detail.

■ IDENTIFYING ADVERSE HEALTH EFFECTS

Each person who donates blood completes an uncomplicated physical examination and blood test before giving blood.

These are not comprehensive tests, but they may help identify undiscovered health concerns, similarly to [anemia](#) or high or low [blood pressure](#).

The test will check the person's:

- **blood pressure**
- **body temperature and heart rate**
- **hemoglobin, or iron levels**

IT'S ALSO A MENTAL HEALTH BENEFIT THAT MANY BLOOD DONORS EXPERIENCE FROM KNOWING THEY'RE HELPING TO SAVE LIVES



If the test reveals a problem, the individual will not be able to donate blood. However, the results could be a first step toward seeking treatment.

■ CONTRIBUTING TO THE COMMUNITY

Donating one unit of blood may save the lives of approximately [three people](#), according to the American Red Cross.

Blood donors provide a vital service to the community. Making a difference in the lives of others can boost a donor's sense of well-being.

■ CARDIOVASCULAR HEALTH

In 2019, [researchers](#) looked at data of virtually 160,000 females who had donated blood for ten years or more. They concluded that donating blood offers a “protective effect of long-term, high frequency blood donation against cardiovascular disease.”

Extra oxidized iron in the body can be harmful to cardiovascular health. In 1998, the American Journal of Epidemiology published [research](#) that suggested blood donation is associated with a lower risk of heart attacks and strokes, decidedly so that regular blood donors are around 88% less inclined than non-donors to have a heart attack, according to the evidence in the published study. This is backed up by like studies in the Journal of Transfusion and the Journal of the American Medical Association, which both show there's strong evidence that blood donation lowers iron stores in the blood and liver and reduces blood viscosity, which places less stress on the arteries and blood vessels and slows blood clotting that can cause heart attack and stroke.

■ BLOOD PRESSURE

Some [research](#) has suggested that donating blood may likewise reduce blood pressure.

In 2015, scientists monitored the blood pressure of 292 donors who gave blood one to four times over the duration of a year. Around half had high blood pressure.

Overall, those with high blood pressure saw an improvement in their readings. The more repeatedly a person gave blood, the more significant the improvement.

Other [experts](#) have noted that because blood pressure testing is an integral part of blood donation, it is a good chance for people to become aware of their reading and, if necessary, learn how to reduce it.

■ WEIGHT MANAGEMENT

There are [claims](#) that giving blood can burn about 650 [calories](#). However, there does not appear to be any scientific evidence to prove this. Any benefits of this kind of calorie loss will be short-term and will not help a person lose weight.

However, a [2012 study](#) suggests that as a result of blood donation centers need to weigh people before they give blood, they can help



THERE CAN BE REACTIONS
OR SIDE EFFECTS, HOWEVER
THEY ARE USUALLY RARE AND
GENERALLY TEMPORARY



identify people with *obesity* and offer them help to manage their weight and any related health problems.

It can also identify people with a low weight, who might also benefit from counseling and advice.

■ REDUCES IRON LEVELS FOR THOSE WITH HEMOCHROMATOSIS

The body requires iron to produce red blood cells. However, approximately *one million people* in the United States have type one hereditary hemochromatosis. People with this and other types of hemochromatosis have too much iron in their blood.

The excess iron can deposit into different organs of the body, such as the liver and the heart, and affect the way those organs' function.

Like the 2003 article written by the *Centers for Disease Control and Prevention (CDC)*, people with hemochromatosis can benefit from phlebotomy, which is a similar process to donating blood.

People with this condition are allowed to donate blood. In other words, for those with hemochromatosis, donating blood can be a treatment option as well as a way of helping others.

Many agencies will not allow donations from people with this condition, but many use their blood in the general donation pool.

■ OVERALL HEALTH

In 2007, researchers looked at the data of over one million blood donors. Among the participants, there was a *30%* lower chance of dying from any cause and a 4% lower chance of developing cancer. The authors concluded that “blood donors enjoy better than average health.”

A *2015 study* took a fresh look at the same data. After adjusting for other factors, the researchers concluded that for each annual donation a person's possibility of dying from any cause fell by 7.5%, on average.

This may indicate that donating blood is good for a person's overall health, but researchers could not confirm this. However, they did point out that donating blood seems unlikely to shorten a person's life span.

Disadvantages

Donating blood is safe, as long as the center follows the standard guidelines.

The United States and many other countries have strict regulations to ensure safety. The FDA and American Association of Blood Banks (AABB) monitor blood banks for this purpose.

Safety precautions they take include:

- screening donors for existing health conditions
- using new needles for each donation
- having professional staff on hand
- providing monitoring and refreshments to ensure a safe recovery

However, there are some possible drawbacks of donating blood.

■ TEMPORARY REACTIONS

Sometimes, a person can experience side effects after donating blood.

Although severe adverse effects are rare and temporary reactions can occur including:

- weakness, dizziness, feeling faint, light-headedness and nausea
- bleeding from the needle prick
- bleeding under the skin or bruising

These symptoms usually disappear within 24 hours.

Some ways of minimizing these effects after donation include drinking plenty of fluids and eating well-balanced meals over the next 24–48 hours.

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

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

■ ADVERSE EFFECTS

In rare cases, an individual *may experience* a more severe adverse effect, such as:

- low blood pressure and muscle contractions
- breathing issues, fainting, vomiting and convulsions



These effects are more inclined to affect younger donors, those with a low weight, and individuals who are donating for the first time.

Procedure

The donation and collection of blood follow a strictly regulated process.

■ PREPARATION

The person should try to get a good night's sleep before donating blood. On arriving at the donation center, they will need to:

- register for donation
- complete a medical history
- undergo a mini physical exam

These steps help ensure that a person has not had exposure to diseases that could affect others through a blood donation.

To give blood in the United States, a person must normally:

- be at least 17 years old and weigh at least 110 lbs. have good overall health
- provide two pieces of identification the first time they donate

They will also need to fill in a form.

■ DURING THE DONATION

During the process of donating blood, a healthcare provider will:

- clean the donor's arm with an alcohol pad
- insert a new and sterile needle into a vein
- attach needle to collection equipment, consisting of tubing and a bag
- allow the blood to flow into the bag until it is full

The person will donate one unit of blood, and this will take 6–10 minutes. The whole process will take around 45–60 minutes.

■ AFTER THE DONATION

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.

Considerations

Before donating blood, a person should ensure that they meet the requirements:

- how is their overall health?
- have any existing health conditions, like hepatitis or HIV?
- do they meet the age and weight requirements?
- have they recently traveled or had a tattoo?
- use recreational drugs, especially intravenously?
- are donating platelets, have they taken aspirin within the last 48 hours?
- have diabetes, do they manage it with medication?

These and many other factors can affect a person's ability to give blood.

It takes only 24 hours for the body to replenish its plasma, but it can take 4–6 weeks to replace the missing blood. This is why most people cannot donate more than once every eight weeks.

Outlook

According to the American Red Cross, someone living in the United States needs blood every two seconds. Around 6.8 million people in the United States donate blood each year, but there are concerns that numbers are falling.

Donating blood can be a worthwhile and rewarding activity. It involves a relatively low level of risk and may offer advantages to some people.

If a person wishes to donate blood, they can find their nearest center using AABB's Blood and Convalescent Plasma Donation Site Locator. They can find a donation drive through the American Red Cross.



GET READY TO ROLL UP YOUR SLEEVES. IN ESSENCE, GIVING BLOOD SERVES AS A MINI MEDICAL EXAM AT NO COST TO YOU

MANY PEOPLE NEED BLOOD PRODUCTS TO KEEP THEM IN GOOD HEALTH AND ALLOW THEM TO STAY ALIVE

