

# Giving Blood

# The Donation Process

Donating blood has never been easier, but careful steps should be taken.

Here are some tips from the American Red Cross on what to do before, during and after your blood donation.

## BEFORE YOU DONATE

You should get a good night's sleep before donating and make sure to drink plenty of water. Iron is central to the production of new blood. So you'll want to eat lots of iron-rich foods before donating, including red meat, poultry, beans, fish, spinach and cereals that are iron-fortified. Discuss your iron needs with a doctor before donating. How much iron is needed depends on a range of factors, including age, body type, gender and personal genetics. If you intend to donate platelets, avoid aspirin for a couple of days beforehand.

## WHEN YOU DONATE

Before leaving, gather your photo identification, and a list of any medications you're taking and their dosages. Eat a healthy meal that's low in fatty foods. Drink some water before the appointment. The recommended amount is 16 ounces. Wear something with sleeves that are short enough to be rolled up to above your elbow. It's smart to bring something else to do while donating, including things like music, reading material or a favorite podcast. Before your donation,



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blood center personnel will conduct a mini-physical to check your blood pressure, temperature and hemoglobin. Consider taking notes on your vital signs, either on paper or through an app on your phone, so that information will be handy later.

## AFTER YOU DONATE

Once your donation is complete, eat a healthy snack and have something else to drink. Blood center staff members will provide both. Stick around for a little while to make sure you are not suffering from any dizziness. Drink extra water

over the next 24 hours, and avoid alcohol. Leave the bandage on for several hours, avoiding exercise and heavy lifting for the remainder of the day. If you later become light-headed, sit or lie down until the feeling passes. Choose iron-rich foods, and consider

taking a multivitamin to increase iron levels while your body recovers. This is particularly important if you frequently donate blood. Apply pressure if the donation site begins to bleed again, raising your arm for 5 to 10 minutes until it stops.



# Who Can Donate

Find out if you are eligible before heading to your local blood drive

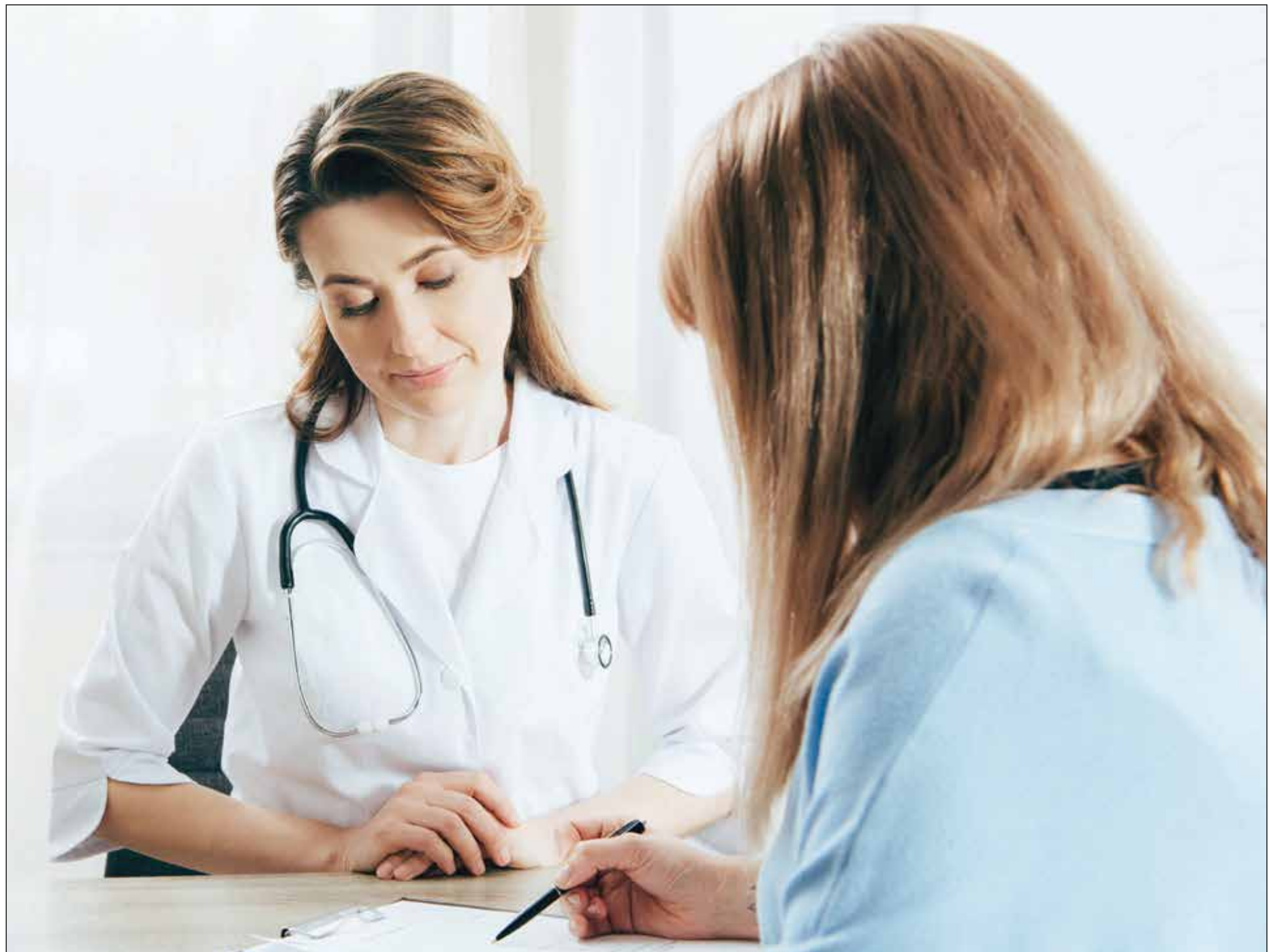
Not everyone is eligible to donate blood. Guidelines have been created that are meant to ensure the safety of both recipients and blood donors.

## YOUR HEALTH

Health issues can be reflected in your blood, so you must be feeling well in order to donate. No one with a fever or an infection can donate. Your iron levels must also be in the healthy range; you'll be tested beforehand. Any donor must weigh at least 110 pounds. Most states require donors to be at least 16 years old; young people under the age of 18 may be required to get parental consent. Donors should not be on blood thinning medications.

## WHO CAN'T DONATE

Those who can't donate blood include: Women who are pregnant, anyone with an acute infection, people who have been prescribed antibiotics because of an infection, or anyone whose blood doesn't clot in a normal way. You can't donate if your blood pressure is below 90/50 or above 190/100. Some cancer diagnoses are also disqualifying. Those who have had Creutzfeldt-Jakob Disease, some forms of tissue or organ transplants, or injections of cadaveric pituitary human growth hormone prior to 1985



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are not eligible.

You can't donate if you've ever had HIV/AIDS or Ebola. Some kinds of recent piercings are disqualifying if they happened within the last three months. People with sickle cell disease can't donate, but those with the sickle cell trait remain eligible. Some specific medica-

tions are disqualifying. Specific forms of international travel may also make you ineligible, as well as some additional lifestyles or medical treatments. Check with your doctor or local blood center.

## HOW OFTEN

You should wait at least

eight weeks between donations of whole blood, and at least seven days between platelet donations. Experts recommend spending 16 weeks between Power Red donations, a process that's similar to whole-blood donations where a special machine extracts two units of red blood cells while

returning platelets and plasma. If you find yourself in one of these waiting periods, or are deemed ineligible to donate blood, remember that there are other ways to help. Consider volunteering at a local donation facility, hosting or co-hosting a blood drive, or making a financial donation.

# What Happens Next?

Experts forecast that blood is needed by a patient in the U.S. every two seconds.

Nearly 30,000 units of red blood are required as part of daily healthcare and the treatment of trauma, along with 6,500 units of plasma and 5,000 units of platelets. Here's how all of those units are eventually used:

## TRAUMA

These uses are most associated with blood drives, as a critical need arises for people who've been involved in an accident or violent incident – including car accidents, falls, storms, shootings or other serious injuries. Power Red donations are the most important since red blood cells carry oxygen to where it's needed in the body. AB Elite donations are also helpful for trauma patients since they come from universal donors, but they are very rare: Only about four percent of the population has AB blood.

## CHRONIC DISEASES

Whole blood donations like the ones at a typical blood drive are also needed by those dealing with chronic disease. Blood types of all kinds must always be on hand. Whole blood donations also help on several levels, since they can be separated into critically needed parts.

## SICKLE CELL

Sickle cell disease is the most common genetic blood problem in the U.S. As many as 100,000 people are impacted, the majority of whom are Black. Roughly 1,000 people are born with sickle cell annually, and they will need multiple blood transfusions throughout the year. Power

Red and whole blood donations are most beneficial to sickle cell patients, with Type O blood as the ideal type. Blood centers are particularly interested in recruiting donors from the Black community, which makes up some 13% of the total U.S. population but only 3 percent of donations.

## BURNS

AB Elite donations are the most needed by burn patients because plasma helps them to maintain a series of vital functions, including blood pressure. At the same time, however, AB Elite donations can sometimes run in short supply because this procedure must be administered at an

official donation center.

## CANCER

Platelet donations are of the greatest benefit to cancer patients since certain cancers and treatments stop platelet creation. Donations are also constantly needed since platelets must be used within five days.







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# Why Diet Is Important

What you eat and drink can greatly impact your donation experience.

Certain foods are recommended for donors. There are also guidelines on what you should (or should not) drink before heading out to the local blood drive or donation center.

## A CRITICAL TEST

Donors must maintain sufficient levels of hemoglobin, an essential iron-rich protein that gives blood its red color. Hemoglobin carries oxygen from the lungs to critical tissues throughout our bodies. You

will be tested by blood center personnel prior to donating, usually with a finger-stick test to draw a small amount of blood. If your levels are off, you will be asked to wait to donate.

## BEFORE YOU GO

Make sure to eat foods that are high in iron content, as well as Vitamin C, before donating blood. Both are crucial to developing and maintaining hemoglobin and for replacing your red blood cells after your donation. Suggested main courses include beef, chicken, lamb and liver, as well as shrimp, tuna, scallops and sardines. For side dishes, look toward spinach, peas, collards and kale. Fruit like

strawberries, figs, raisins and prunes are also recommended, as are some breads, beans and cereals. Talk to your doctor or nutritionist to find out more.

## STAYING HYDRATED

Staying hydrated is critically important since about half of your donation is made up of water. Before donating, the American Red Cross recommends drinking an additional 16 ounces of water in addition to the general guidelines of 9-13 cups a day. Stay away from alcoholic beverages, since they cause dehydration. Low hydration levels during a blood donation can lead to a dangerous drop in blood

pressure as fluids are lost.

## AFTER DONATING

Once your donation is complete, you'll make a pit stop in a recovery area for a light snack and more healthy liquids. Rest long enough to make sure you aren't feeling dizzy. After heading home, avoid rigorous activity and limit any heavy lifting for one day. If you later experience any dizzy spells, refrain from driving or operating heavy machinery. Our blood pressure can drop when we overheat or stand up for long periods of time. For the first eight hours after donating, you should also avoid hot showers, lengthy jogs or walks, and alcoholic beverages.

# Know Your Blood Type

There are four separate blood groups, all determined by antigens.

Our blood type is determined by the presence or absence of antigens, and they in turn trigger immune responses. That's why typing blood is so critically important in healthcare. A protein called Rh can also be either positive or negative. Together, they create the most typical blood types:

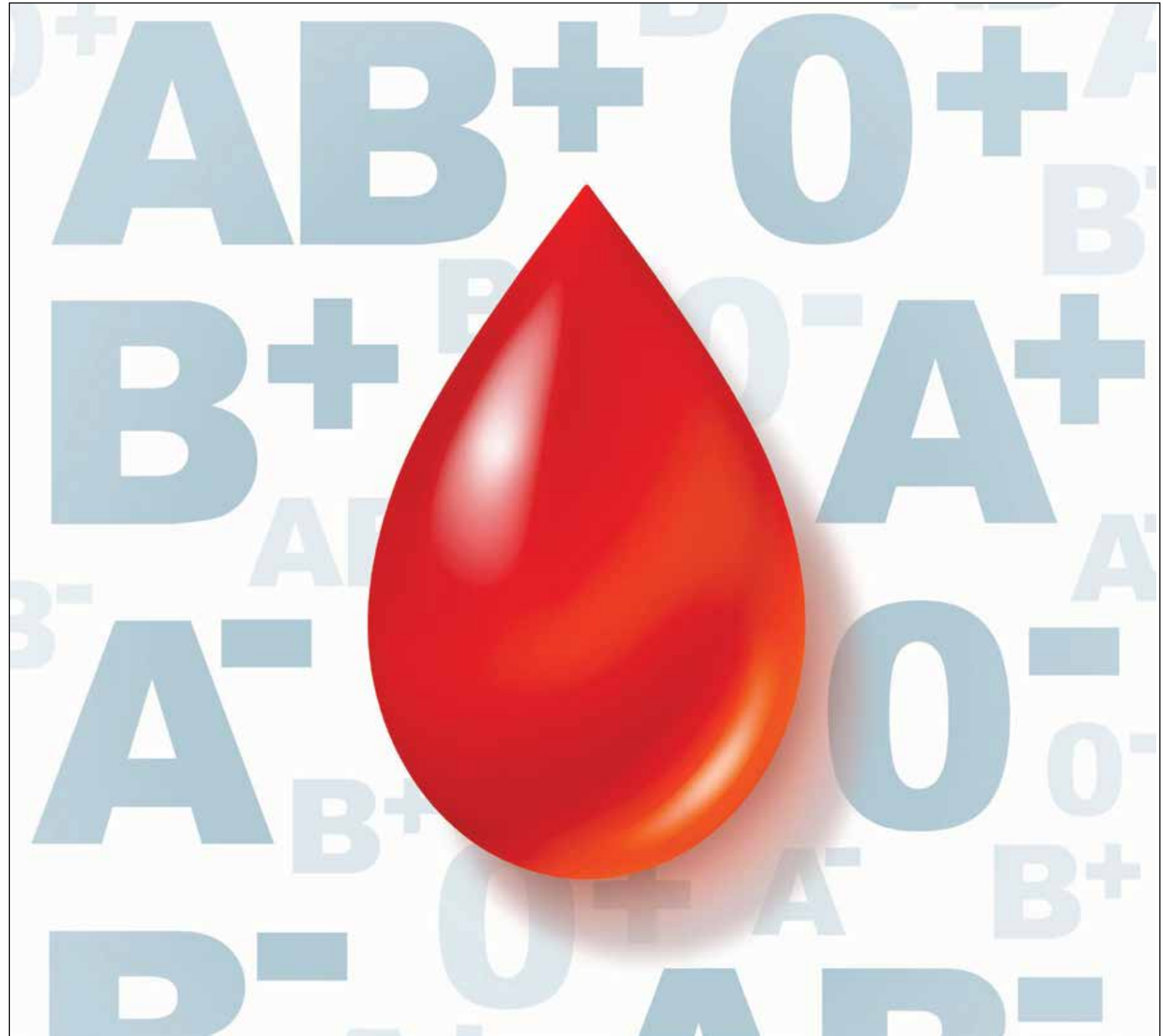
## GROUPS

A+, A-, B+, B-, O+, O-, AB+ and AB- are the most commonly found types. Group A blood types have red blood cells with only the A antigen while the B antibody is found in the plasma. Those with Type A blood can donate to others who are either A or AB. Those in Group B have these things reversed — with a B antigen in the red blood cells and the A in their plasma. People with Type B can donate to types B and AB.

Group AB types boast A and B antigens in the red cells, but neither in their plasma. Those in this group can only donate to others with AB blood. Group O doesn't have A or B antigens in their red cells but both A and B antigens in their plasma. Known as the universal donor, Type O can give red blood cells to anyone.

## RH FACTOR

Rh factors are inherited. Rh-positive patients can receive either Rh-positive or negative blood, while Rh negative blood can only be given to patients who are Rh negative. This is reversed with plasma. As such, a Rh-negative woman who is pregnant with a Rh-positive child may produce antibodies that impact their health. People with Rh-positive blood do not produce anti-Rh antigens so they can receive



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either Rh-positive or Rh-negative blood.

## UNIVERSAL DONORS

The most urgently needed donors are Type O- since this blood can be

used in transfusions for anyone. Type O- blood is commonly used in emergency situations and with those who suffer from immune deficiencies. The American Red Cross is among those who have made a priority of recruiting

Black and Hispanic people to donate, since more of them have Type O blood. Still, just seven percent of the total population has Type O- blood, so anyone with this type is encouraged to donate as often as they can.



# Consider Donating Plasma

Like whole blood, plasma is a crucial building block in health care — and, similarly, it can't be manufactured in a laboratory. This whole process relies on donations.

## WHAT IS PLASMA?

Plasma is a yellow mixture of water, proteins and salts that's also found in your bloodstream. Mostly water, plasma makes up more than half of blood volume. It's used as a starting material in a range of important therapies. They replace deficient or missing proteins that are usually found in human plasma for people with life-long diseases, some of which are genetic. Many of these patients need regular plasma infusions over the course of their lives, making your regular donations all the more important.

## HOW DONATIONS WORK

There are specific facilities set up for plasma donations, since this process is different from regular blood donations. Plasma donors must bring a government-issued form of identification. When you arrive, donation center personnel will provide a short health history questionnaire that will also ask a few life-



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style questions. You'll undergo a blood and general health screening, while your absence from the National Donor Deferral Registry is confirmed. The testing is focused on identifying the presence of viruses transmitted through the bloodstream, including hepatitis and HIV, and may be administered more than once.

Technicians then conduct a

process called plasmapheresis, which separates plasma from the other components of your blood. The rest of the blood is then returned to donors while they remain at the donation site. This involves injecting needles in both arms, one for removing whole blood from your body and the other to replace the remaining blood after it's

been processed.

## WHAT HAPPENS NEXT?

First-time donors should expect to be on-site for about two hours. Thereafter, the process usually takes about 90 minutes, with plasmapheresis taking up the bulk of that time. Some plasma centers will pay donors for their plasma but note that this material

is then used for research rather than in everyday health care. How much you'd be compensated varies by individual donation center. Call first to find out more. Plasma can be donated much more often than whole blood, as often as two times a week. But experts recommend waiting at least two days between donations.

# It's Good For You, Too

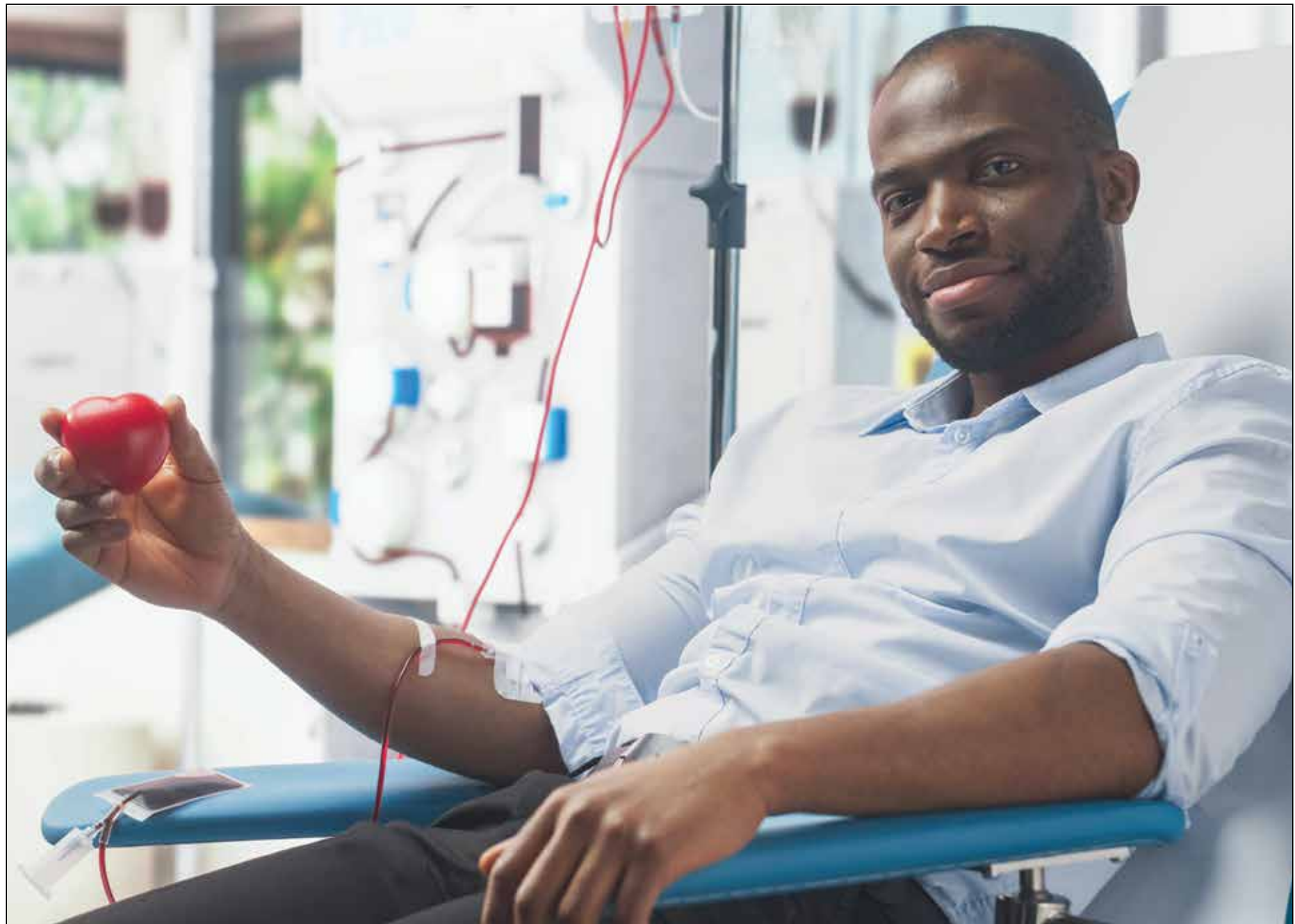
There are personal health benefits involved with this selfless act

Giving blood always leads to good feelings, since you're helping those in need. But your donations also have tangible, very positive personal impacts, as well.

## IRON

The American Red Cross notes that blood donations help us remove excess iron from our bodies, and that's one of the primary benefits of regularly giving. Iron is required for growth and development, as the body uses iron to create hemoglobin in red blood cells to carry oxygen to our bodies through our bloodstream. Iron is also a building block for myoglobin, a protein that gets oxygen to our muscles. Some critical hormones also need iron.

At the same time, an excess of iron may lead to build-up in the heart, liver or pancreas. That can lead to life-threatening situations, including diabetes, heart problems and liver disease. Reducing iron levels has been associated with lower mortality rates and cancer risk, according to researchers with the Journal of the National Cancer Institute. Too much iron is also linked by doctors to high blood pressure, especially for men who don't have a history of giving blood.



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## HEALTH SCREENINGS

Regularly giving blood also means receiving important health updates through required pre-donation screenings. Every visit to a blood bank essential offers us a regular checkup, since their personnel take blood pressure readings, monitor cholesterol, and test other vital signs beforehand. These details can

play a vital role in early identification of heart disease, a leading cause of death annually in America. These mini-physicals will often provide indicators for other illnesses in their earliest stages, as blood is tested for infections like HIV, hepatitis, syphilis and West Nile virus, as well. Donors are nearly 90% less likely to suffer a heart

attack, according to researchers with the American Journal of Epidemiology, and almost 35% less likely to have cardiovascular events of any kind.

## FOCUS ON WOMEN

Donating blood can lead to better heart health. Women regularly pass excess iron through menstruation, regularly lowering their risk for a

heart attack. That changes, however, after menopause when these risks can rapidly increase. Giving blood can help re-balance things as iron is removed as part of the donation process. Your donations also help improve blood flow, which lowers pressure on blood vessels and fewer blockages in our arterial systems.