Giving **BLOOD**

How Diet Affects Donating

Thinking about giving blood? That's great! There is a big need for your donation, and the act of giving can also benefit your health directly.

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But before you plan to make a blood donation, you should understand how the things you eat and drink can affect how your donation experience goes. There are many things to consider, including the types of food and drink that are recommended for donors.

Without sufficient levels of an essential protein, hemoglobin, you may be asked to wait to donate.

Hemoglobin is an essential iron-containing mineral gives blood its red color. According to the American Red Cross, hemoglobin's primary responsibility is to carry oxygen from our lungs and provide nourishment to necessary tissues throughout the body. Many clinics perform a hemoglobin-level check by using a finger-stick test to draw blood before a donation.

Here are some tips from the American Red Cross for a successful trip to a donor facility.

PRIOR

Eating foods that are high in iron and vitamin C provide significant benefits to your body before blood is drawn. These minerals are crucial to the development of hemoglobin and replacing red blood cells after donating.

Here are some nutritious types of foods you should consume in the days leading up to a drive.

Meat: beef, lamb, chicken and liver.

Seafood: shrimp, scallops, tuna and sardines.

Vegetables: peas, spinach, kale and collards.

Fruit: Strawberries, raisins, figs and prunes

You can also find beneficial levels of necessary nutrients in bread, cereal and beans.

It's imperative to stay hydrated before your donation and afterward. Keep in mind, around half of the blood you will lose is made up of water. The Red Cross suggests drinking an extra 16 ounces of nonalcoholic beverages, in addition to the recommended nine to thirteen cups per day. Ensuring hydration levels are efficient can help avoid a drop in blood pressure as you lose fluids during the donation process.

AFTER

As your body regulates after losing blood, visit the recovery area for a light snack and continue drinking healthy liquids. You should avoid performing any rigorous activities and limit heavy lifting for the day. If you do feel dizzy during the time afterward, avoid doing activities where fainting can be dangerous, like driving or operating machinery.

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Be Prepared: Quick Facts

As January opens the door for a new year, Americans across the country will welcome the new decade by celebrating National Blood Donor Month.

Whether you're a first-timer or a veteran in donation, you should know some beneficial tips for a wholesome way to save a life.

Check out this helpful information from the American Red Cross to understand the process and how to prepare.

THE PROCESS IS QUICK

The entire donation process typically only takes one hour. That's the same amount of time that an average 1,800 citizens will require life-saving blood treatment in the country. To streamline a make sure to wear a T-shirt or one with sleeves that can be quickly rolled up.

UNBIASED TO BLOOD TYPES

A blood bank requires numerous types of fluid to remain productive and beneficial. You won't be turned away for having a particular makeup, or for not knowing which group you represent. It's a great way to discover your blood type if you're unsure, as donors may choose to find out after a donation.

BE IN GOOD HEALTH

Never attempt to donate blood while suffering from illnesses like the flu. Be honest about types of medicine you're taking and concerns you have about how your health may affect donation.

NEVER TOO OLD

Most states require donors to reach a certain age before they can donate, but there is no upper limit. The Red Cross states many of their dedicated donors are senior citizens, and they encourage more to partake in a donation event.

PRE-REGISTER

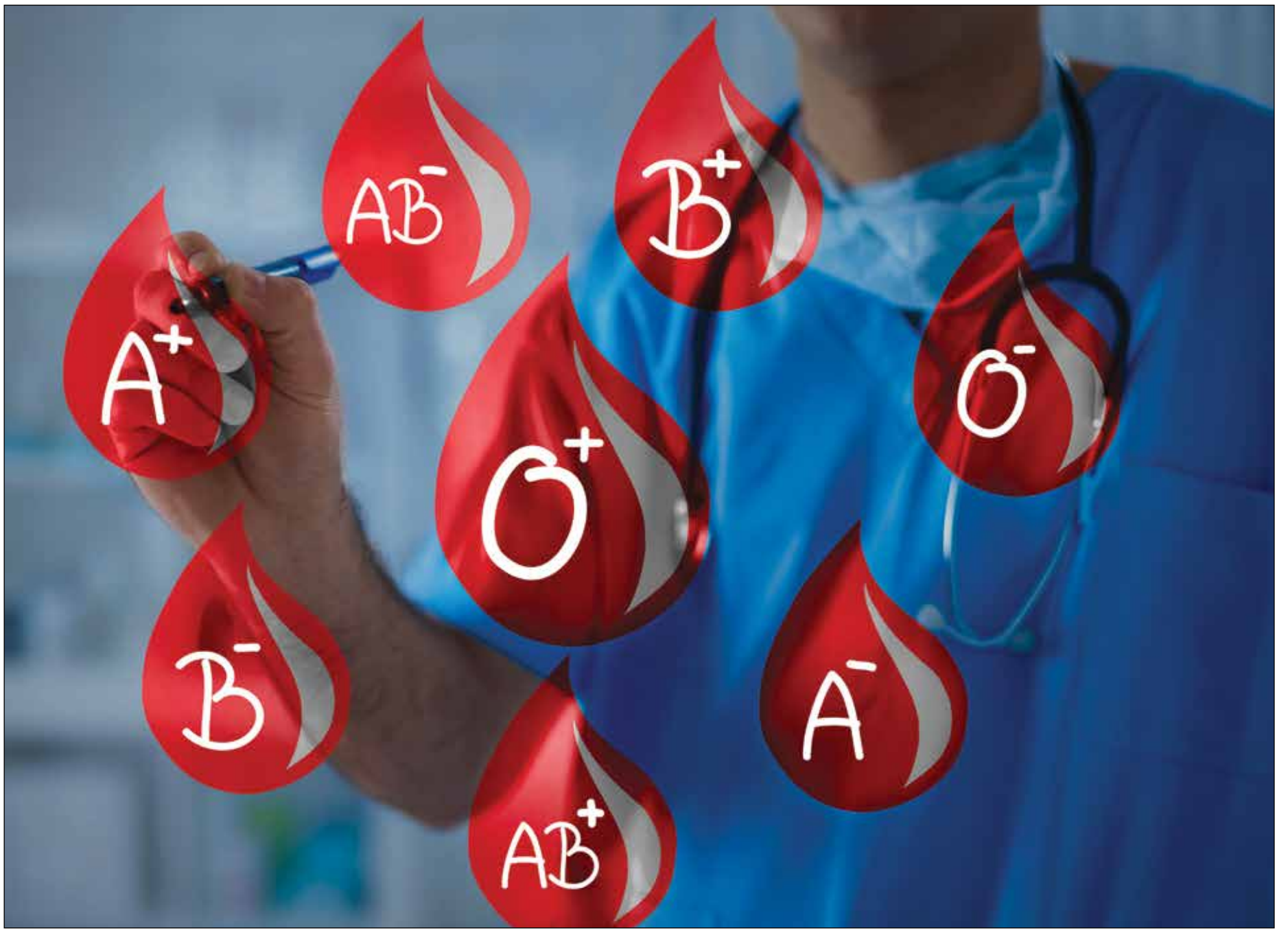
Take advantage of the RapidPass questionnaire to pre-register for a blood donation. It must be filled out on the day of your appointment and requires relevant information about your state of health. It's easily discoverable by using the Red Cross Blood Donor App.

HYDRATE AND EAT

Consume plenty of iron-rich foods and water both before and after a blood donation. It will provide your body with the nutrients it needs to recover. Afterward, treat yourself to a free post-donation snack to help quickly replenish yourself.

Know your Blood Type

It wasn't until 1900 when medical experts discovered blood types were different between patients, according to the United States National Library of Medicine.



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Karl Landsteiner of the University of Vienna sought an answer as to why some transfusions were successful, while others resulted in death. He ultimately went on to receive the Nobel Prize in physiology in 1930 for his discovery and life work.

The discovery of blood types led to the development of the ABO Blood System Group that professionals use today. The system recognizes four main groups — A, B, O and AB. The difference between the types depends on the combination of protein molecules known as antigens or antibodies, which make up your blood.

Since not all blood is compatible, it's essential to understand where you stand, in an emergency, it could be life-saving. It can also open your eyes to serious health risks that are more prevalent amongst the groups, so you can take proactive measures to protect yourself.

Check out what researchers at Penn Medicine of the University of Pennsylvania shows the relationship among blood groups and disease.

HEART RISK

Since the connection between our hearts and blood is synonymous with our overall health, it's no surprise that certain types can interfere with the function of this main organ. An ABO gene found in people of the A, AB, or AB blood group is shown to have more risk for a heart attack for developing heart disease. This gene is not present in those in the O group.

You can reduce your risks by participating in an active lifestyle, quit smoking, get regular wellness exams for heart monitoring and avoid highly polluted areas.

BRAIN FUNCTION

The same gene, ABO, is also connected with degraded brain function and memory loss. The research shows that people with A, B, and AB blood are 85% more likely to develop cognition and memory problems, often leading to dementia. To ensure your brain is healthy, Penn State suggests avoiding stress, sleeping at least seven to nine hours per day and visit with your physician regularly.

CANCER

Certain types of cancer are also more prevalent within different blood groups. Type A patients are shown to carry a higher risk of stomach cancer. Whereas the ABO gene is linked to higher rates of lung, breast, colorectal, prostate and liver.

Why Can't you Donate?

Someone needs blood every two seconds and 4.5 million Americans require a transfusion each year, according to the Community Blood Center.

To keep with the demand for life-saving blood products, consider contributing to the cause. However, the CBC states that only 37% of the United States population is eligible to give, due to numerous factors that disqualify candidates.

These are a few common reasons why the American Red Cross requests interested donors to avoid donating.

AGE

Donors should be at least 17 years old unless you have parental consent, then 16-year-olds may qualify. It's essential to check your local state's law as each may have its unique age restrictions. However, people under the age of 17 are typically allowed to donate blood for their use in instances like post-surgery for themselves or a family member.

DONATION INTERVALS

Donors should avoid giving too much blood. Here is how you should spread out intervals for different types of donations.

Standard: Wait at least eight weeks after giving a whole blood donation.

Platelet: Seven days should pass before attempting to donate again.

Power red: Red cell donations should not be performed any sooner than 16 weeks.

Waiting for the proper intervals to expire ensures blood has re-established its cells removed during a previous donation.

MEDICATIONS

Typically, medication will not disqualify you from giving blood, but there are specific formulas that may require exceptional diligence. Medicine such as blood thinners, psoriasis treatment and arthritis reliever may require extended waiting periods. It's crucial to disclose your history with prescription and over-the-counter medication before donating.

WEIGHT AND HEIGHT

Our body size determines blood volume. While there is generally no upper limit, you must weigh at least 110 pounds and meet a weight-to-height ratio. Refer to your donations center's guidelines for giving.

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CAN'T GIVE?

If you find yourself meeting criteria that may disqualify you from donating blood, consider doing your part in another way. Blood drives require numerous volunteers to operate efficiently. Ask your local blood bank how you can get involved. Or you can consider organizing an event in your neighborhood or financially contributing to an existing one.

How your Blood Helps

Blood donations help a variety of people facing personal emergencies. To get inspired to celebrate National Blood Donor Month this January, learn how your contribution can offer life-saving solutions to those in your community.

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The organization Advancing Transfusion and Cellular Therapies Worldwide estimates that 6.8 million people donate blood at its sponsored centers or hospitals each year. A unit of donated blood will benefit multiple patients, as a donation is commonly separated into individual components like red blood cells, plasma and platelets.

Learn who your blood donations are helping and how your contribution is changing their lives.

CANCER PATIENTS

Blood carries essential components that are often damaged by cancer treatments. Here are three elements that the experts at Dana-Farber Cancer Institute suggest that patients often require as replenishment.

Red blood cells: Molecules in charge of carrying oxygen to organs and remove carbon dioxide from our lungs

Plasma: This combination of water, proteins, fat and hormones transports blood and platelets, vitamins and waste products throughout the body, and

Platelets: This component is essential for allowing blood to clot when cuts or open wounds occur.

Cancer patients are often exposed to surgery, which results in blood loss or chemotherapy and radiation that significantly leads to low blood cell counts or risks of infection.

BURN VICTIMS

LifeShare estimates that about 12% of donated blood goes to burn victims. It's used to help regulate oxygen levels, limit anemia and enhance tissue healing, which preserves organ function. A recent study funded by the United States Army Medical Research proved that less is more when treating burn patients.

The research found that a median of 16 units of given blood is as capable of life-saving results as only eight units. Its goal is to set a new industry standard and make better use of the available blood supply in burn centers nationwide.

HELP YOURSELF

While the reasons for people who rely on blood donations vary dramatically, did you know that giving can also provide you with benefits? First, each time you give, an expert performs a short health screening to detect diseases that relate to blood pressure or infections.

It's also beneficial to reducing the risk of heart and liver problems that stem from having too much iron in our system. Another exceptional reason is to stimulate the production of new blood cells, which assists in maintaining overall health.

Blood Donations: By the Numbers

A thriving blood supply is essential across the country in hospitals, clinics and blood banks. It benefits numerous people during emergencies or to assist when they are overcoming cancer treatment or other chronic illnesses.

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In case you're wondering how giving blood can help the general population, here are a few specific examples from the World Health Organization:

- Women with complications of pregnancy, such as ectopic pregnancies and hemorrhage before, during or after childbirth.
- Children with severe anemia often resulting from malaria or malnutrition.
- People with severe trauma following disasters.
- Many complex medical and surgical procedures and cancer patients.

HOW YOU CAN HELP

There is a constant need for regular blood supply, as blood can be stored for only limited periods. Do your part to ensure local facilities are stocked to support yourself, loved ones and peers in their times of need.

These inspiring statistics from the Blood Centers of America show you the importance of taking the initiative of donating seriously.

- About one in seven people entering a hospital requires blood.
- In America and Canada, 43,000 pints of donated blood are used each day.
- One pint of blood can save up to three lives.
- Plasma is 90% water and makes up about 55% of blood volume.
- Most donated red blood cells can be stored for up to 42 days.
- Blood or plasma that was given for payment cannot be used for human transfusions.
- Shortages of all blood types occur most during the summer and winter holidays.
- The number one reason donors say they give is because "want to help other people."
- If only one more percent of the American population donated, future shortages would be unforeseeable.
- An estimated 500,000 Americans donated blood in the days following the Sept. 11, 2001, attacks.
- A patient could be passed up for a lifesaving organ if compatible blood is not available.
- A single donation typically takes one hour and one pint can save up to three lives.
- Fluids are replaced within one hour after a donation. Red blood cells replenish after four weeks, and iron levels are restored within eight weeks.

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The Journey of Donated Blood

While donating blood is undoubtedly a rewarding experience, knowing how it finds a patient creates wholesome feelings of accomplishment.

From the initial donation process to the finished product being given to someone in need, the journey your gift travels requires diligence from experts.

During a whole blood donation, about a pint is drawn and a portion goes into multiple test tubes. Typically, your blood, containers and donor records are labeled with identical barcodes for information. Test tubes are then iced down and taken to an authorized facility for processing.

Check out the next steps a blood donation takes before finding a suitable patient, according to the American Red Cross.

PROCESSING

Once blood reaches the proper center, the attached barcodes provide valuable information about your donation. It can then be split into different configurations to benefit specific needs. It is generally broken down into several components:

Plasma: Commonly processed into cryoprecipitate, it assists in building clots to slow down bleeding.

Red cells and platelets: Specialists remove white blood cells to ensure they don't cause a reaction to a transfusion recipient.

Packaging: Components are then packaged into units that doctors use when performing a transfusion.

TESTING

Experts administer a dozen tests to ensure the correct blood type and there are no signs of infectious diseases. Disqualified donations are tagged electronically at the processing center, resulting in the blood being discarded. Donors will receive notification regarding the reason for failure.

STORAGE AND DISTRIBUTION

Blood that is suitable for transfusion receives certification and is stored in refrigerators at 6 degrees Celsius for up to 42 days. Platelets remain at room temperature for up to five days, while plasma can remain frozen for up to a year. The Red Cross can ship available blood to hospitals every day to supplement stock during emergencies.

TRANSFUSION

Once an ill or injured patient arrives for medical treatment, experts can determine if a transfusion is beneficial. It can be helpful during childbirth, surgery and cancer treatments. Many people suffering from anemia or iron deficiency are candidates for this procedure.