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Blood Transfusion and Donation

Every year, millions of people in the United States receive life-saving blood transfusions. During a transfusion, you receive whole blood or parts of blood such as:

- Red blood cells - cells that carry oxygen to and from tissues and organs
- Platelets - cells that form clots to control bleeding
- Plasma - the liquid part of the blood that helps clotting. You may need it if you have been badly burned, have liver failure or a severe infection.

Most blood transfusions go very smoothly. Some infectious agents, such as HIV, can survive in blood and infect the person receiving the blood transfusion. To keep blood safe, blood banks carefully screen donated blood. The risk of catching a virus from a blood transfusion is low.


Sometimes it is possible to have a transfusion of your own blood. During surgery, you may need a blood transfusion because of blood loss. If you are having a surgery that you're able to schedule months in advance, your doctor may ask whether you would like to use your own blood, instead of donated blood. If so, you will need to have blood drawn one or more times before the surgery. A blood bank will store your blood for your use.

NIH: National Heart, Lung, and Blood Institute

Start Here

- [About Blood Donation \[https://www.aabb.org/for-donors-patients/about-blood-donation/\]](https://www.aabb.org/for-donors-patients/about-blood-donation/)
(Association for the Advancement of Blood & Biotherapies)
- [Blood Donation \[https://www.mayoclinic.org/tests-procedures/blood-donation/about/pac-20385144?p=1\]](https://www.mayoclinic.org/tests-procedures/blood-donation/about/pac-20385144?p=1)
(Mayo Foundation for Medical Education and Research)
Also in Spanish [[https://www.mayoclinic.org/es/tests-procedures/blood-donation/about/pac-20385144?p=1\]](https://www.mayoclinic.org/es/tests-procedures/blood-donation/about/pac-20385144?p=1)]
- [Blood Donation FAQs \[https://americasblood.org/for-donors/blood-donation-faqs/\]](https://americasblood.org/for-donors/blood-donation-faqs/) (America's Blood Centers)
- [Blood Donation Process \[https://www.redcrossblood.org/donate-blood/blood-donation-process/donation-process-overview.html\]](https://www.redcrossblood.org/donate-blood/blood-donation-process/donation-process-overview.html) (American Red Cross)
- [Blood Transfusion \[https://www.mayoclinic.org/tests-procedures/blood-transfusion/about/pac-20385168?p=1\]](https://www.mayoclinic.org/tests-procedures/blood-transfusion/about/pac-20385168?p=1)
(Mayo Foundation for Medical Education and Research)
- [Treatments for Blood Disorders \[https://www.nhlbi.nih.gov/health/blood-bone-marrow-treatments\]](https://www.nhlbi.nih.gov/health/blood-bone-marrow-treatments)
 (National Heart, Lung, and Blood Institute)
Also in Spanish [[https://www.nhlbi.nih.gov/es/salud/sangre-y-medula-osea-tratamientos\]](https://www.nhlbi.nih.gov/es/salud/sangre-y-medula-osea-tratamientos)]


Diagnosis and Tests

- [Red Blood Cell Antibody Screen \[https://medlineplus.gov/lab-tests/red-blood-cell-antibody-screen/\]](https://medlineplus.gov/lab-tests/red-blood-cell-antibody-screen/)
 (National Library of Medicine)
Also in Spanish [[https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-anticuerpos-contra-los-globulos-rojos/\]](https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-anticuerpos-contra-los-globulos-rojos/)]

Prevention and Risk Factors

- Eligibility Requirements [<https://www.redcrossblood.org/donate-blood/how-to-donate/eligibility-requirements.html>] (American Red Cross)
- Questions about Blood [<https://www.fda.gov/vaccines-blood-biologics/blood-blood-products/questions-about-blood>] (Food and Drug Administration)


Related Issues

- Diversity in Blood Types [<https://www.redcrossblood.org/donate-blood/blood-types/diversity.html>] (American Red Cross)
- Facts About Blood and Blood Types [<https://www.redcrossblood.org/donate-blood/blood-types.html?icid=rdrt-blood-types&imed=direct&isource=drupal>] (American Red Cross)
- How You Can Help Medical Research: Donating Your Blood, Tissue, and Other Samples [<https://www.cancer.gov/publications/patient-education/help-research-donate-tissue>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/publicaciones/educacion-para-pacientes/como-contribuir-a-la-investigacion-medica>]
- Precautions and Adverse Reactions during Blood Transfusion [<https://www.merckmanuals.com/home/blood-disorders/blood-transfusion/precautions-and-adverse-reactions-during-blood-transfusion>] (Merck & Co., Inc.)
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/transfusi%C3%B3n-de-sangre/precauciones-y-reacciones-adversas-durante-una-transfusi%C3%B3n-de-sangre>]

Specifics

- Blood Transfusion [<https://www.lls.org/treatment/types-treatment/blood-transfusion>] (Leukemia & Lymphoma Society)
- Exchange transfusion - series [https://medlineplus.gov/ency/presentations/100018_1.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/esp_presentations/100018_1.htm]
- Kinds of Blood Product Transfusions [<https://www.cancer.org/cancer/managing-cancer/treatment-types/blood-transfusion-and-donation/what-are-transfusions.html>] (American Cancer Society)





Videos and Tutorials

- Testing Your Blood [<https://www.youtube.com/watch?v=NJJ6ru6EiDs>]  (College of American Pathologists)

Statistics and Research

- Blood Facts and Statistics [<https://www.redcrossblood.org/donate-blood/how-to-donate/how-blood-donations-help/blood-needs-blood-supply.html>] (American Red Cross)


Clinical Trials

- ClinicalTrials.gov: Blood Donors [<https://clinicaltrials.gov/search?cond=%22Blood+Donors%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Blood Substitutes and Alternatives [<https://clinicaltrials.gov/search?intr=%22blood+substitutes%22+OR+%22plasma+substitutes%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Blood Transfusion [<https://clinicaltrials.gov/search?intr=blood+transfusion&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Transfusion Reaction [<https://clinicaltrials.gov/search?cond=%22Transfusion+Reaction%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

- Article: Blood transfusion training for prehospital providers: a scoping review. [https://www.ncbi.nlm.nih.gov/pubmed/40745553]
- Article: Characteristics, Regional Evaluation, and D-Antigen in Transfusions by Emergency Medical Services. [https://www.ncbi.nlm.nih.gov/pubmed/40742584]
- Article: Analysis of Massive Transfusion Protocol Utilization in Trauma Across Sociodemographic Groups. [https://www.ncbi.nlm.nih.gov/pubmed/40731763]
- Blood Transfusion and Donation -- see more articles [https://pubmed.ncbi.nlm.nih.gov/?term=%22Transfusion+Reaction%22%5Bmajr%3Anoexp%5D+OR+%22Blood+Safety%22%5Bmajr%3Anoexp%5D+OR+%22Blood+Donors%22%5Bmajr%3Anoexp%5D+OR+%22Blood+Transfusion%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+]

Find an Expert

- American Red Cross [https://www.redcross.org/] Also in Spanish [https://www.redcross.org/cruz-roja.html]
- National Heart, Lung, and Blood Institute [https://www.nhlbi.nih.gov/] 
- Where to Donate Blood [https://www.aabb.org/for-donors-patients/give-blood] (Association for the Advancement of Blood & Biotherapies)

Teenagers

- Blood Transfusions (For Teens) [https://kidshealth.org/en/teens/transfusions.html]  (Nemours Foundation) Also in Spanish [https://kidshealth.org/es/teens/transfusions.html]

Patient Handouts

- Blood donation before surgery [https://medlineplus.gov/ency/patientinstructions/000367.htm] (Medical Encyclopedia) Also in Spanish [https://medlineplus.gov/spanish/ency/patientinstructions/000367.htm]
- Blood transfusions [https://medlineplus.gov/ency/patientinstructions/000431.htm] (Medical Encyclopedia) Also in Spanish [https://medlineplus.gov/spanish/ency/patientinstructions/000431.htm]



MEDICAL ENCYCLOPEDIA

ABO incompatibility [https://medlineplus.gov/ency/article/001306.htm]

Blood donation before surgery [https://medlineplus.gov/ency/patientinstructions/000367.htm]

Blood transfusions [https://medlineplus.gov/ency/patientinstructions/000431.htm]

Exchange transfusion [https://medlineplus.gov/ency/article/002923.htm]

Exchange transfusion - series [https://medlineplus.gov/ency/presentations/100018_1.htm]

Hemolytic transfusion reaction [<https://medlineplus.gov/ency/article/001303.htm>]

Related Health Topics

Blood Disorders [<https://medlineplus.gov/blooddisorders.html>]

Organ Donation [<https://medlineplus.gov/organdonation.html>]

Stem Cells [<https://medlineplus.gov/stemcells.html>]

National Institutes of Health

The primary NIH organization for research on *Blood Transfusion and Donation* is the National Heart, Lung, and Blood Institute [<http://www.nhlbi.nih.gov/>]

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