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## Blood Disorders

Also called: Hematologic diseases

Your blood [<https://medlineplus.gov/blood.html>] is living tissue made up of liquid and solids. The liquid part, called plasma, is made of water, salts and protein. Over half of your blood is plasma. The solid part of your blood contains red blood cells, white blood cells and platelets.

Blood disorders affect one or more parts of the blood and prevent your blood from doing its job. They can be acute or chronic. Many blood disorders are inherited. Other causes include other diseases, side effects of medicines, and a lack of certain nutrients in your diet.

Types of blood disorders include:

- Platelet disorders [<https://medlineplus.gov/plateletdisorders.html>] , excessive clotting [<https://medlineplus.gov/bloodclots.html>] , and bleeding problems [<https://medlineplus.gov/bleedingdisorders.html>] , which affect how your blood clots
- Anemia [<https://medlineplus.gov/anemia.html>] , which happens when your blood does not carry enough oxygen to the rest of your body
- Cancers of the blood, such as leukemia [<https://medlineplus.gov/leukemia.html>] and myeloma [<https://medlineplus.gov/multiplemyeloma.html>]
- Eosinophilic disorders [<https://medlineplus.gov/eosinophilicdisorders.html>] , which are problems with one type of white blood cell.

## Start Here

- Blood (For Parents) [<https://kidshealth.org/en/parents/blood.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/blood.html>]
- Blood Diseases [<https://www.niddk.nih.gov/health-information/blood-diseases>]  
 (National Institute of Diabetes and Digestive and Kidney Diseases)  
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/enfermedades-sangre>]

## Symptoms

- Symptoms of Blood Disorders [<https://www.merckmanuals.com/home/blood-disorders/symptoms-and-diagnosis-of-blood-disorders/symptoms-of-blood-disorders>] (Merck & Co., Inc.)  
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/s%C3%ADntomas-y-diagn%C3%B3stico-de-los-trastornos-de-la-sangre/s%C3%ADntomas-de-los-trastornos-de-la-sangre>]

## Diagnosis and Tests

- Blood Count Tests: MedlinePlus Health Topic [<https://medlineplus.gov/bloodcounttests.html>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/bloodcounttests.html>]
- Blood Tests [<https://www.nhlbi.nih.gov/health/blood-tests>]  (National Heart, Lung, and Blood Institute)  
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/analisis-de-sangre>]

- **Hemoglobin Electrophoresis** [<https://medlineplus.gov/lab-tests/hemoglobin-electrophoresis/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/electroforesis-de-hemoglobina/>]

- **Karyotype Genetic Test** [<https://medlineplus.gov/lab-tests/karyotype-genetic-test/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-cariotipo/>]

## Related Issues

- **Lupus and the Heart, Lungs, and Blood** [<https://www.lupus.org/resources/how-lupus-affects-the-heart-and-circulation>] (Lupus Foundation of America)  
Also in Spanish [<https://www.lupus.org/es/resources/como-afecta-el-lupus-al-corazon-y-la-circulacion>]

## Specifics

- **Eosinophilia** [<https://www.mayoclinic.org/symptoms/eosinophilia/basics/definition/SYM-20050752?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/symptoms/eosinophilia/basics/definition/sym-20050752?p=1>]
- **Heavy Chain Diseases** [<https://www.merckmanuals.com/home/blood-disorders/plasma-cell-disorders/heavy-chain-diseases>] (Merck & Co., Inc.)  
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/trastornos-de-las-c%C3%A9lulas-plasm%C3%A1ticas/enfermedades-de-las-cadenas-pesadas>]
- **Hemoglobin C, S-C, and E Diseases** [<https://www.merckmanuals.com/home/blood-disorders/anemia/hemoglobin-c-s-c-and-e-diseases>] (Merck & Co., Inc.)  
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/anemia/enfermedades-de-la-hemoglobina-c-s-c-y-e>]
- **High Red Blood Cell Count** [<https://www.mayoclinic.org/symptoms/high-red-blood-cell-count/basics/definition/SYM-20050858?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/symptoms/high-red-blood-cell-count/basics/definition/sym-20050858?p=1>]
- **Low White Blood Cell Count** [<https://www.mayoclinic.org/symptoms/low-white-blood-cell-count/basics/definition/SYM-20050615?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/symptoms/low-white-blood-cell-count/basics/definition/sym-20050615?p=1>]
- **Lymphocytosis (High Lymphocyte Count)** [<https://www.mayoclinic.org/symptoms/lymphocytosis/basics/definition/SYM-20050660?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/symptoms/lymphocytosis/basics/definition/sym-20050660?p=1>]
- **Monoclonal Gammopathies** [<https://www.hopkinsmedicine.org/health/conditions-and-diseases/monoclonal-gammopathies>] (Johns Hopkins Medicine)
- **Neutropenia (Low Neutrophil Count)** [<https://www.mayoclinic.org/symptoms/neutropenia/basics/definition/SYM-20050854?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/symptoms/neutropenia/basics/definition/sym-20050854?p=1>]
- **Overview of Plasma Cell Disorders** [<https://www.merckmanuals.com/home/blood-disorders/plasma-cell-disorders/overview-of-plasma-cell-disorders>] (Merck & Co., Inc.)  
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/trastornos-de-las-c%C3%A9lulas-plasm%C3%A1ticas/introducci%C3%B3n-a-los-trastornos-de-las-c%C3%A9lulas-plasm%C3%A1ticas>]
- **Overview of White Blood Cell Disorders** [<https://www.merckmanuals.com/home/blood-disorders/white-blood-cell-disorders/overview-of-white-blood-cell-disorders>] (Merck & Co., Inc.)  
Also in Spanish [<https://www.merckmanuals.com/es-us/hogar/trastornos-de-la-sangre/trastornos-de-los-gl%C3%ADbulos-blancos-leucocitos/introducci%C3%B3n-a-los-trastornos-de-los-gl%C3%ADbulos-blancos-leucocitos>]
- **Paroxysmal Nocturnal Hemoglobinuria (PNH)** [<https://www.aamds.org/pnh>] (Aplastic Anemia and MDS International Foundation)
- **Polycythemia Vera** [<https://www.mayoclinic.org/diseases-conditions/polycythemia-vera/symptoms-causes/syc-20355850?p=1>] (Mayo Foundation for Medical Education and Research)  
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/polycythemia-vera/symptoms-causes/syc-20355850?p=1>]
- **What Is Lymphopenia?** [<https://www.nhlbi.nih.gov/health/lymphopenia>]  (National Heart, Lung, and Blood Institute)

## Genetics

- Aceruloplasminemia: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/aceruloplasminemia]  (National Library of Medicine)
- CLPB deficiency: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/clpb-deficiency]  (National Library of Medicine)
- Congenital plasminogen deficiency: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/congenital-plasminogen-deficiency]  (National Library of Medicine)
- Dyserythropoietic anemia and thrombocytopenia: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/dyserythropoietic-anemia-and-thrombocytopenia]  (National Library of Medicine)
- Familial erythrocytosis: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/familial-erythrocytosis]  (National Library of Medicine)
- Hereditary spherocytosis: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/hereditary-spherocytosis]  (National Library of Medicine)
- McLeod neuroacanthocytosis syndrome: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/mcleod-neuroacanthocytosis-syndrome]  (National Library of Medicine)
- Methemoglobinemia, beta-globin type: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/methemoglobinemia-beta-globin-type]  (National Library of Medicine)
- Neuroferritinopathy: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/neuroferritinopathy]  (National Library of Medicine)
- Paroxysmal nocturnal hemoglobinuria: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/paroxysmal-nocturnal-hemoglobinuria]  (National Library of Medicine)
- Polycythemia vera: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/polycythemia-vera]  (National Library of Medicine)
- X-linked sideroblastic anemia: MedlinePlus Genetics [https://medlineplus.gov/genetics/condition/x-linked-sideroblastic-anemia]  (National Library of Medicine)

## Clinical Trials

- ClinicalTrials.gov: Blood Cells [https://clinicaltrials.gov/search?cond=%22Blood+Cells%22&aggFilters=status:not%20rec]  (National Institutes of Health)
- ClinicalTrials.gov: Hematologic Diseases [https://clinicaltrials.gov/search?cond=%22Hematologic+Diseases%22&aggFilters=status:not%20rec]  (National Institutes of Health)

## Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Co-infections during SARS-CoV-2 infection in hematologic patients and cell therapy recipients... [https://www.ncbi.nlm.nih.gov/pubmed/40713537]
- Article: Evaluation of MC-80 automatic blood cell morphology analyzer in identifying the... [https://www.ncbi.nlm.nih.gov/pubmed/40696611]
- Article: The quantity and quality of B-cell immunity against SARS-CoV-2 in children... [https://www.ncbi.nlm.nih.gov/pubmed/40672943]
- Blood Disorders -- see more articles [https://pubmed.ncbi.nlm.nih.gov/?term=%22Hematologic+Diseases%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bdat%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+]

## Reference Desk

- Hematology Glossary [<https://www.hematology.org/education/patients/blood-basics/hematology-glossary>] (American Society of Hematology)

## Find an Expert

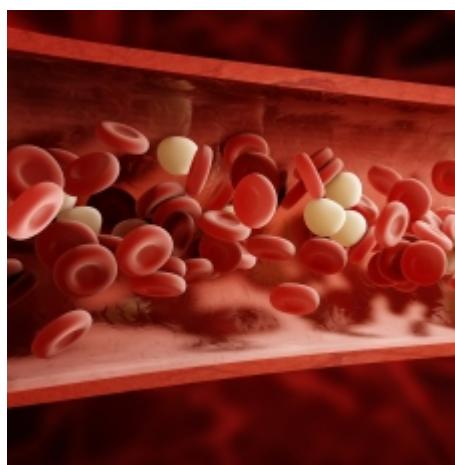
- Find a Hematologist [<https://www.hematology.org/education/patients/find-a-hematologist>] (American Society of Hematology)
- National Heart, Lung, and Blood Institute [<https://www.nhlbi.nih.gov/>] 

## Children

- Hereditary Spherocytosis [<https://kidshealth.org/en/parents/hereditary-spherocytosis.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/hereditary-spherocytosis.html>]

## Patient Handouts

- Blood differential test [<https://medlineplus.gov/ency/article/003657.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003657.htm>]
- Blood smear [<https://medlineplus.gov/ency/article/003665.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003665.htm>]
- CBC blood test [<https://medlineplus.gov/ency/article/003642.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003642.htm>]
- Hematocrit [<https://medlineplus.gov/ency/article/003646.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003646.htm>]
- Hemoglobin [<https://medlineplus.gov/ency/article/003645.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003645.htm>]
- Low white blood cell count and cancer [<https://medlineplus.gov/ency/patientinstructions/000675.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000675.htm>]
- RBC count [<https://medlineplus.gov/ency/article/003644.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003644.htm>]
- RBC indices [<https://medlineplus.gov/ency/article/003648.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003648.htm>]
- WBC count [<https://medlineplus.gov/ency/article/003643.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/003643.htm>]



## MEDICAL ENCYCLOPEDIA

Agranulocytosis [<https://medlineplus.gov/ency/article/001295.htm>]

Arterial stick [https://medlineplus.gov/ency/article/003422.htm]

Blood differential test [https://medlineplus.gov/ency/article/003657.htm]

Blood smear [https://medlineplus.gov/ency/article/003665.htm]

Blood typing [https://medlineplus.gov/ency/article/003345.htm]

Capillary sample [https://medlineplus.gov/ency/article/003427.htm]

CBC blood test [https://medlineplus.gov/ency/article/003642.htm]

Coombs test [https://medlineplus.gov/ency/article/003344.htm]

Cord blood testing [https://medlineplus.gov/ency/article/003403.htm]

Donath-Landsteiner test [https://medlineplus.gov/ency/article/003668.htm]

Haptoglobin blood test [https://medlineplus.gov/ency/article/003634.htm]

Hematocrit [https://medlineplus.gov/ency/article/003646.htm]

Hemoglobin [https://medlineplus.gov/ency/article/003645.htm]

Hemoglobin C disease [https://medlineplus.gov/ency/article/000572.htm]

Hemoglobin electrophoresis [https://medlineplus.gov/ency/article/003639.htm]

Hemoglobinopathy [https://medlineplus.gov/ency/article/001291.htm]

Hemolytic crisis [https://medlineplus.gov/ency/article/003270.htm]

Hemolytic disease of the newborn [https://medlineplus.gov/ency/article/001298.htm]

Hereditary elliptocytosis [https://medlineplus.gov/ency/article/000563.htm]

Hereditary ovalocytosis [https://medlineplus.gov/ency/article/000566.htm]

Low white blood cell count and cancer [https://medlineplus.gov/ency/patientinstructions/000675.htm]

Methemoglobinemia [https://medlineplus.gov/ency/article/000562.htm]

Methemoglobinemia - acquired [https://medlineplus.gov/ency/article/000561.htm]

Methylene blue test [https://medlineplus.gov/ency/article/003412.htm]

Neutropenia - infants [https://medlineplus.gov/ency/article/007230.htm]

Osmotic fragility test [https://medlineplus.gov/ency/article/003641.htm]

Paroxysmal cold hemoglobinuria (PCH) [https://medlineplus.gov/ency/article/000557.htm]

Paroxysmal nocturnal hemoglobinuria (PNH) [https://medlineplus.gov/ency/article/000534.htm]

Polychromatophilia [https://medlineplus.gov/ency/article/001318.htm]

Polycythemia - newborn [https://medlineplus.gov/ency/article/000536.htm]

RBC count [https://medlineplus.gov/ency/article/003644.htm]

RBC indices [https://medlineplus.gov/ency/article/003648.htm]

Serum free hemoglobin test [https://medlineplus.gov/ency/article/003677.htm]

Sugar-water hemolysis test [https://medlineplus.gov/ency/article/003673.htm]

Twin-to-twin transfusion syndrome [https://medlineplus.gov/ency/article/001595.htm]

Venipuncture [https://medlineplus.gov/ency/article/003423.htm]

WBC count [https://medlineplus.gov/ency/article/003643.htm]

## Related Health Topics

Anemia [<https://medlineplus.gov/anemia.html>]

Bleeding Disorders [<https://medlineplus.gov/bleedingdisorders.html>]

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

Blood Clots [<https://medlineplus.gov/bloodclots.html>]

Blood Count Tests [<https://medlineplus.gov/bloodcounttests.html>]

Blood Transfusion and Donation [<https://medlineplus.gov/bloodtransfusionanddonation.html>]

Childhood Leukemia [<https://medlineplus.gov/childhoodleukemia.html>]

Eosinophilic Disorders [<https://medlineplus.gov/eosinophilicdisorders.html>]

Hemochromatosis [<https://medlineplus.gov/hemochromatosis.html>]

Hemophilia [<https://medlineplus.gov/hemophilia.html>]

Leukemia [<https://medlineplus.gov/leukemia.html>]

Rh Incompatibility [<https://medlineplus.gov/rhcompatibility.html>]

Thalassemia [<https://medlineplus.gov/thalassemia.html>]

## National Institutes of Health

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

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