

# Transfusion Medicine and its Risk Factors

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Transfusion medicine is a branch of medicine that covers all aspects of blood transfusion and blood components, including those related to blood vigilance. Doctors specializing in blood bank/transfusion medicine are responsible for maintaining an adequate blood supply, the safety of blood donors and recipient patients, and the proper use of blood. It includes topics such as blood donation, immunohematology and other blood transfusion-transmitted diseases laboratory testing, clinical blood transfusion practice management and monitoring, patient blood management, therapeutic apheresis, stem cell collection, cell therapy, and coagulation. Laboratory management and understanding of state and federal regulations related to blood products are also important parts of this field. In most countries, experts in immunohematology and transfusion medicine provide expert advice on the rational use of large amounts of blood transfusions, difficult/incompatible blood transfusions, and professional treatment of blood products such as irradiated blood/washed blood products. A blood donation center is a facility that collects blood components from selected blood donors. It can be whole blood or it can only collect individual components like plasma or platelets through apheresis. These blood components are then transported to a central location for processing, such as fractionation, analysis, and redistribution. Tests include determining blood type and detecting infectious diseases. Whole blood is divided into red blood cells, platelets, and plasma, and plasma can be further refined into individual components such as albumin, clotting factor concentrates, and immunoglobulin.