

Role of blood transfusion :

1. A physician's order is necessary for a blood transfusion.
2. A physician must obtain informed consent for the initial transfusion and any additional units that are needed for a change in the patient's condition or for reasons other than the initial reason for transfusion.
3. Only one unit of blood is issued by the Blood Bank at one time. Exception: GOR, ICU, ER, DR when patient condition indicates, red cell and thawed plasma products are issued in an insulated blood product shipping box on ice. Platelet products must remain at controlled temperature (20-24°C controlled room temperature) with agitation.
4. If blood or components cannot be infused in four hours due to patient condition, the product should be divided in the Blood Bank and stored appropriately in the Blood Bank until needed.
5. No medication or other solutions (except 0.9% normal saline) may be added to any unit of blood, or simultaneously infused in the same I.V. line.
6. Under no circumstances should blood be put in any refrigerator outside the Blood Bank.
7. Blood drawn for a Type and Screen will be held for 72 hours. Any time during this 72-hour period, blood drawn for the type and screen may be used to crossmatch blood for patient use.
8. Crossmatched blood will be held for 48 hours in the Blood Bank.
9. If multiple red cell transfusions are to be given over a period of days, a fresh Type next labeled specimen for crossmatching must be drawn every seventy-two (72) hours (exception: NICU patient). If only plasma or platelets (non-red cell products) are being transfused, then a new patient sample is not necessary on the same admission.
10. When fresh frozen plasma is ordered, the Blood Bank must be notified one half hour before it is to be given so it can be thawed.
11. The unit of blood must begin transfusing within twenty-five (25) minutes of pickup from the Blood Bank or be returned to the Blood Bank for proper storage.
12. Blood and blood products must be hung by a registered nurse, LPN, or physician.
13. Transfusion reaction, regardless of severity, must be reported promptly by the nurse or physician. When platelets, irradiated red cells or other special products are ordered, arrangements must be made. Blood Bank will indicate approximate amount of time needed to provide product.

14. The Y-type blood transfusion tubing may be used with 2 units of blood. The Y-set must not be used for maintenance IV solutions or antibiotics.
15. The empty blood transfusion bag is discarded in biohazard trash.
16. If the product was not totally transfused, then document the reason on the Unit Transfusion Record.
17. In addition, if more than 50cc of untransfused product remain, then hand carry untransfused product to Blood Bank for proper accountability and disposition (FDA requirement).
18. Entered/opened blood bags cannot be returned through the pneumatic tube. Chart the original copy of the completed Transfusion Record Form and return the copy to the Blood Bank.

Blood diseases: There are many different blood diseases that are diagnosed and treated by hematologists. Some of these are benign (non-cancerous) and others are types of blood cancer. They can involve one or more of the three main types of blood cells (red blood cells, white blood cells, and platelets). They can also involve blood proteins involved in clotting. Not every blood disorder requires treatment.

✚ **Red Blood Cell Disorders** – Deficiencies or abnormalities in the red blood cells.

1. **Anemia** – A deficiency in the number of red blood cells often causing weakness and pallor.
2. **Aplastic Anemia** – A type of anemia occurring when the bone marrow fails to produce enough of all three types of blood cells: red cells, white cells, and platelets.
3. **Sickle Cell Anemia** – an inherited blood disorder where blood cells are sickle (or “C”) shaped and block blood flow. Clumps of sickle cells block blood flow to the limbs and organs, and can cause pain, serious infection, and organ damage.
4. **Thalassemia** – A hereditary blood disorder affecting hemoglobin, the molecule that carries oxygen.

✚ **White Blood Cell Disorders** – (abnormalities in the production of white blood cells)

1. **Myelofibrosis** – A chronic disease manifested by fibrous material in the bone marrow, anemia and an enlarged spleen. Also known as agnogenic myeloid metaplasia.
2. **Myeloma** – a cancer of plasma cells, a type of white bloods cell.
3. **Myelodysplasia** – A group of disorders where bone marrow does not function properly and does not produce enough normal blood cells.
4. **Leukemia** – A group of diseases where white blood cells grow uncontrollably. These diseases are classified according to how quickly the disease grows and the type of cells affected.
5. **Lymphoma** – A tumor that arises in the lymph nodes or in other lymphoid tissue.

✚ **Platelet Disorders** – (usually a deficiency in platelets leading to easy bruising and excessive bleeding)

1. **Immune Thrombocytopenic Purpura (ITP)** – A clinical syndrome where a decreased number of platelets causes bleeding, and easy bruising. ITP Science includes information about diagnosing ITP, treatment goals, as well as helpful information for patients recently diagnosed with the disorder.
2. **Essential Thrombocytosis** – A disorder in which platelets are overproduced, which can lead to both blood clotting and bleeding.
3. **Clotting Disorders** – Problems affecting the ability to clot blood, leading to excessive bleeding or excessive clotting. The Coagulation Factors site features articles and news on coagulation disorders, and also includes a health directory and information on clinical trials for coagulation disorder patients.
4. **Hemophilia** – A bleeding disorder caused by a problem in one of the factors of blood clotting.
5. **Von Willebrand Disease** – A hereditary disease where there is a deficiency of the von Willebrand factor, which is a factor that affects platelet function. This often leads to excessive bleeding.
6. **Hypercoagulable states** – These are inherited or acquired abnormalities that increase a person's risk of developing a blood clot. Examples include Factor V Leiden mutations, Protein C deficiency, and Lupus anticoagulant.
7. **Hemochromatosis** – A disorder where patients absorb extra amounts of iron from their daily diet and over time. The excess iron can build up in organs such as the heart, liver, and pancreas. If left untreated, diabetes, heart disease and liver failure can result.