

Whole Blood:	<ul style="list-style-type: none"> ☐ One unit of whole blood contain: ☐ 450 ml of donor blood . ☐ 50 ml of anticoagulant-preserved solution . ☐ Hb about 12g/dl and ☐ haematocrit 35-45% . ☐ No functional platelets. 	<ol style="list-style-type: none"> 1- Erythroblastosis fetalis . 2- A person may receive a whole blood transfusion if they have <ol style="list-style-type: none"> a. severe traumatic hemorrhage b. with severe bleeding. 	<ul style="list-style-type: none"> - Blood used is stored at 4°C not more than 21 days. - The blood is warmed before transfusion to restore the Na-K pump. - Hb% is not less than 90% (13g/dl). - ☐ Hematocrit value at least 40%.
Packed red blood cells transfusion (PRBC)	<p>Each unit is approximately</p> <ul style="list-style-type: none"> - 330 mL of donor blood - haematocrit of 50-70 per cent. 	<ol style="list-style-type: none"> 1- A patient suffering from an iron deficiency anemia or symptomatic anemia 2- sickle cell crisis . 3- acute blood loss more than 30% of blood volume. 	<ul style="list-style-type: none"> - Blood Bank refrigerator at temp of 1-6°C until issue. - The shelf life is 42 days from the date of collection.
Fresh frozen plasma (FFP):	<ul style="list-style-type: none"> - Is rich in coagulation factors - Made from the liquid portion of whole blood. - 	<ol style="list-style-type: none"> 1. It is the first-line therapy in the treatment of coagulopathic hemorrhage. 2. treat conditions in which there are low blood clotting factor (INR>1.5) or low level of other blood proteins. 3. Non-life-threatening warfarin-induced bleeding 4. Vitamin K deficiency 5. DIC 6. In patient with liver disease ,major hepatic resection and sever liver injuries 7. TTP 	<ul style="list-style-type: none"> - Stored at -40 to -50°C with a two-year shelf life.
Cryoprecipitate	<ul style="list-style-type: none"> - precipitate of fresh frozen plasma - rich in factor VIII - and fibrinogen. - 3-6 gms fibrinogen in 200-500 ml - raises the fibrinogen level by approx. 1g/L. 	<ol style="list-style-type: none"> 1. Indicated in low fibrinogen states (<1g/L) or in cases of factor VIII deficiency (hemophilia-a) 2. von will brand's disease 3. source of fibrinogen in DIC. 	<ul style="list-style-type: none"> - It is stored at 30 degrees centigrade with a 2: years shelf life. - Must be infused within 6 hours.
Prothrombin complex concentrate (PCC):	<ol style="list-style-type: none"> 1. contain factors II, IX and X 2. may also contain factor VII (vitamin K-dependent clotting factors). 	<ol style="list-style-type: none"> 1. replacement therapy for congenital or acquired vitamin-K deficiency warfarin- induced anticoagulant effect, particularly in the emergent setting. 	
platelets	<ul style="list-style-type: none"> - Normal human platelet counts range from 150,000 to 450,000 cells/μL. 	<ol style="list-style-type: none"> 1. Platelet transfusion is mainly indicated to treat or prevent bleeding in patients with thrombocytopenia or platelet function disorder. 2. Platelets transfusion also used in: Chemotherapy and Radiation. 3. Therapy platelets dysfunction. 4. Less than 30,000 cells/μL when bleeding is not life-threatening 5. Less than 50,000 cells/μL with severe bleeding, including DIC 6. Less than 100,000 cells/μL for bleeding in the context of multiple trauma or intracranial bleeding 	<ul style="list-style-type: none"> - Stored at 20-24C so they carry a greater risk of bacterial contamination.

