

## **Blood Primer**

Blood is living tissue made up of many parts, called components. Blood is perishable and only lasts 42 days. Platelets last only 5 days. It is a constant balancing act to maintain an adequate inventory of the right blood products, at the right time, for the right patients.

Whole blood can be separated into five parts:

1. Red cells
2. White blood cells
3. Plasma
4. Platelets
5. Cryoprecipitate

It is rare for one unit of blood from an individual to be transfused as whole blood. Rather, the unit of blood is separated into its various components, enabling it to help several patients. These are the functions of blood in the human body:

1. Red blood cells help transport oxygen throughout the body.
2. White blood cells help fight off disease and infection.
3. Plasma, a pale yellow mixture of water, proteins and salts, is used to expand the volume of blood within the body.
4. Platelets, essential to clotting, are used for the treatment of cancer and leukemia patients as well as surgery patients.
5. Cryoprecipitate is a concentrated plasma component which contains certain clotting proteins. It's used to treat patients with bleeding disorders and is sometimes used to make a surgical glue.

### **More specific examples include:**

1. Cancer patients undergoing chemotherapy treatments may be given platelets. A transfusion of platelets replaces those damaged or destroyed by the chemotherapy.
2. An open heart surgery patient might receive platelets, as well as red blood cells, to replace blood lost during surgery and to help transport oxygen through the body.
3. Plasma is used to help stop bleeding and to restore fluid loss from burns.
4. White blood cells are effective in helping the body fight infection and disease.

### **Blood facts**

1. There are 4 main blood types: A, B, AB and O.
2. Type O negative is the **universal red cell donor**, and this person's blood can be transfused into a recipient with any blood type.
3. Type AB is the **universal plasma and platelet donor**; this person can receive blood from any other blood type.
4. O positive is the most common blood type.
5. 10 pints: amount of blood in the body of an average adult.
6. The rarest blood type is the one not on the shelf when it's needed by a patient.