

**Donor:** A person who gives whole blood or one of its components.

**Types of Blood donation (Donor Categories):**

1. **Allogeneic** ( also called *homologous* ) **donation** is when a donor gives blood for storage at a blood bank for transfusion to an **unknown recipient** .
2. **Directed donation** is when a person, often a **family member** , donates blood for transfusion to a specific individual.
3. **Autologous donation**. When a person has blood stored that will be transfused back to the donor at a later date, usually after surgery.

**Criteria for selection of donors:** Following guidelines should be observed in order to determine that the blood donation will not be detrimental to the donors/recipients.

1. **Physical Examination:** A medical officer should certify the donor fit for blood donation.
2. **General Appearance:** The donor shall be in good health and mentally alert on the day of donation , and donor shall not be a jail inmate or a drug/ alcohol addict The donor should have eaten something in the last 8 hours and had 5 hours sleep.
3. **Age:** Donors should be between the age of 18 and 65 years.
4. **Haemoglobin or packed Cell Volume (Haematocrit):** The haemoglobin should be not less than 12.0 gm/dl or the packed cell volume (haematocrit) should be not less than 36%.
5. **Weight:** Blood collection from donors weighing 45-55 Kg should be 350 ml blood and from those weighing 55 Kg and above should be 450 ml.
6. **Blood Pressure:** The systolic blood pressure should be between 100 and 160 mm of mercury and the diastolic pressure should be between 60-90 mm of mercury.
7. **Temperature:** Temperature should not exceed 37.50C/ 99.5oF
8. **Pulse:** Pulse should be between 60 to 100 beats per minute and regular.
9. **Donor Skin:** The skin at the venepuncture site should be free of any skin lesion or scar indicative of addiction to narcotics or infection as well as marks of repeat venepuncture.

**Donation interval :** The interval between two blood donations should be at least 12 weeks. Usually 3-4 months.

**Definition of blood collection:** A procedure whereby a single donation of blood is collected in an anticoagulant solution.

**Blood collection procedure :** Under aseptic conditions, blood is collected into a primary sterile plastic collection bag with one to three satellite bags attached for component preparation. At the end of the collection, specimen tubes are filled and sent to the laboratory to be tested for infectious agents. The tubing of the blood bag is heat sealed to provide specimens for further use without interrupting the sterility of the system.

**Blood collection time:** Total blood collection time should be between 8 to 12 minutes. If the time exceeds 12 minutes, the blood collected shall not be used for platelet preparation.

**Blood volume collected:** Blood flowing into the bag is mixed with anticoagulant in a ratio of 1:7 (anticoagulant : blood). Total collection volume is from 405-495 mL and usually, a volume of 450 mL blood is donated, this being approximately 12% of total blood volume or 10.5 mL/kg body weight.

1. 350ml in single bags for whole blood transfusion.
2. 450ml in double or triple bags for preparation of packed red cells, fresh frozen plasma and platelet concentrates.

**Physical Examination:** The donor must be medically fit and must not have any identifiable risk factors that could result in an adverse outcome to the recipient. In practice, it is impossible to perform a complete medical and physical examination of every prospective donor.

1. Inspection for anaemia, jaundice, cyanosis, dyspnea, recent alcohol ingestion
2. Inspection for needle tracks or extensive skin disease
3. Weight: The volume of donation should not be more than 13% of the estimated blood volume to protect against vasovagal attacks.
4. Blood pressure
5. Pulse- normal rhythm, upper limit 100/min

**Care before donation :** The donor should not be fasting before donation. If the last meal was taken more than four hours previously, the donor should be given something to eat and drink before donation.

**Care during donation:** If donor faints, stop blood collection immediately. Put the head at the end of the couch/ chair down or alternatively raise the donor legs. Donor head may be placed between knees, fold both the legs and take aromatic ammonia spirit cotton just near the nose. Monitor blood pressure, pulse rate and temperature under the supervision of doctor (transfusion medicine or trained doctor). Aromatic ammonia spirit is used to prevent or treat fainting. Before starting collection of blood from donor, check routinely oxygen cylinder and emergency drugs as per directions of drugs and cosmetics rule

**Post –donation care :** All blood donors shall be made to rest for at-least 15 minutes post-donation and shall be provided with oral fluids and post donation advice and instructions in the form of ‘Information note’.

1. After blood donation the blood donor should be kept under observation and some advices must be given, in order to attend any adverse reactions in the immediate post donation period.
2. In case of bleeding from phlebotomy site, raise the arm and apply pressure.
3. If there is feeling of faintness or dizziness lie down or sit with head between knees.
4. Remove the band –aid after 5-6 hours.
5. Avoid driving soon after the blood donation.
6. Do not undertake any unaccustomed exercise after blood donation.
7. Take a rest for minimum of 20 minutes.
8. Take some snacks and juice. It contains a high sugar and helps in backup of blood sugar.
9. Have a meal that contains high protein such as chicken, fish, etc.
10. Don't do heavy work, i.e. jogging, gym, dancing, carrying heavy goods, etc.