

What is **Blood Bank**..?



A blood bank is a center where blood gathered as a result of blood donation is stored as preserved for later use in blood transfusion. The term 'Blood Bank' typically refers to division of a hospital where the storage of blood products occurs and where proper testing is performed.

-Wikipedia-

The policies/ procedures of criteria in selecting blood donors

- The person must fulfill several criteria to be accepted as a blood donor. These criteria are set forth to ensure the safety of the donor as well as the quality of donated blood.

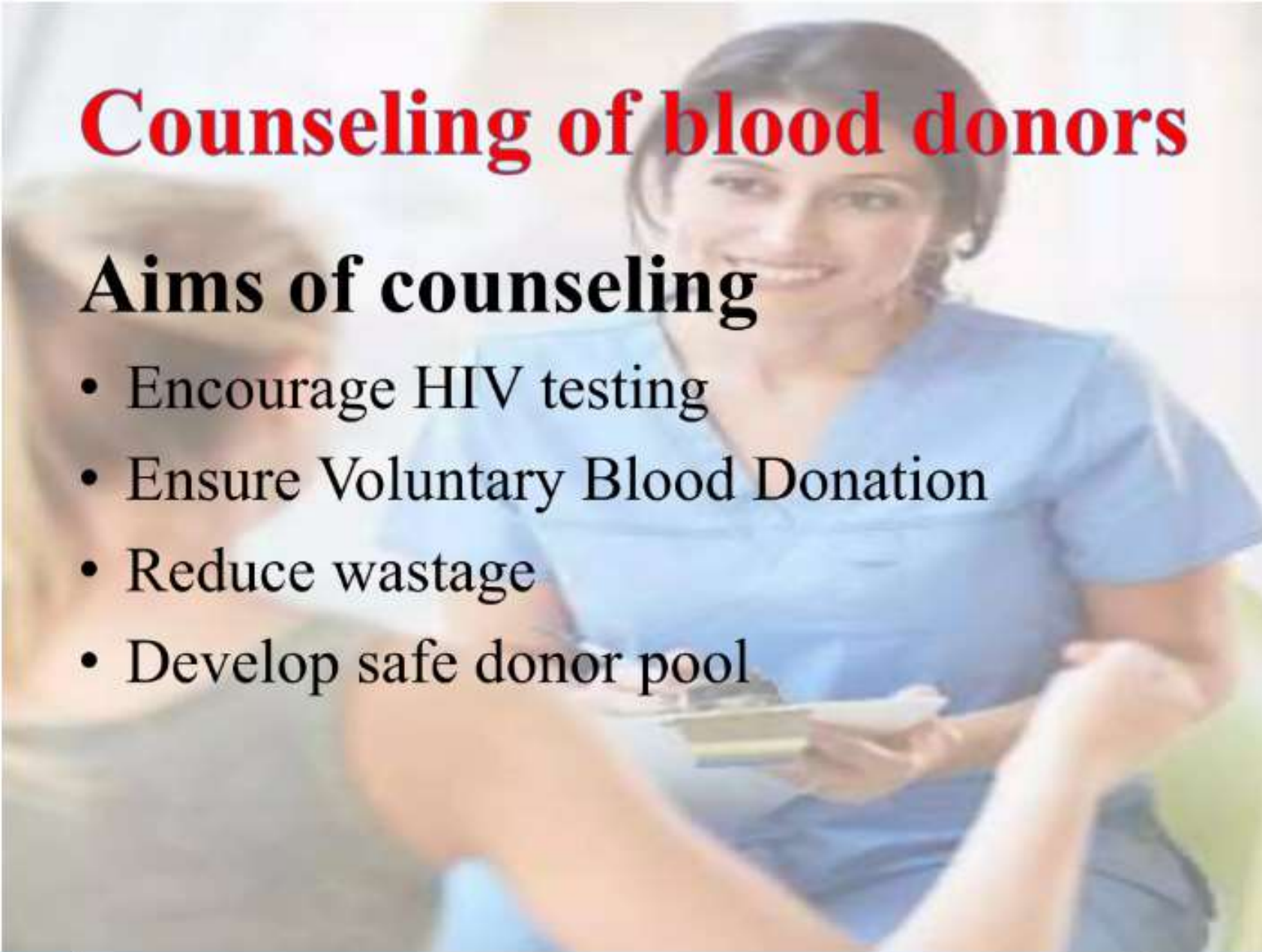
Donor Selection Criteria

- Age above 18 years and below 60 years.
- If previously donated, at least 4 months should be elapsed since the date of previous donation.
- Hemoglobin level should be more than 12g/dL. (this blood test is done prior to each blood donation)
- Free from any serious disease condition or pregnancy.
- Should have a valid identity card or any other document to prove the identity.
- Free from "Risk Behaviors".
- Risk Behavior
 - Homosexuals
 - Sex workers and their clients
 - Drug addicts
 - Engaging in sex with any of the above.
 - Having more than one sexual partner

Counseling of blood donors

Aims of counseling

- Encourage HIV testing
- Ensure Voluntary Blood Donation
- Reduce wastage
- Develop safe donor pool



Two types of counseling

1. Pre donation counseling

This is an opportunity to explain to the blood donor about the donation process, the value of honest responses and the benefit of blood donation.

2. Post donation counseling

Donors be notified in a confidential manner of test results for TTI markers and any medically significant finding(s) identified during the pre-donation evaluation

Pre donation counseling

- Verify the identification of the donor and ensure that you have the correct Medical History Form.
- Review the donor information part of the Medical History Form with the donor.
- Assure the donor that his/her information will be kept confidential.
- Discuss with the donor risk behavior for HIV and other sexually transmitted diseases.
- Explain to the donor the consequences of not being honest when answering the questions.
- Encourage feedback and questions from the blood donor.

Pre donation counseling (Cont)

- Explain to the donor the quantity of blood to be drawn, tests to be carried out the donated blood and inform him/her that he/she will be notified of the results if any of the results are irregular.
- Make sure the donor understands the information that you have shared.
- Inform the donor about the importance of self-exclusion from the donation process if he/she believes his/her blood is not suitable for transfusion.
- Discourage blood donation in order to obtain tests results.
- Review the questionnaire with the donor and ask further questions where the responses are not clear.
- Ask the donor if they have had all their questions adequately answered.

Post donation counseling

- Counseling should be conducted in an environment that is conducive to a confidential, one-to-one discussion between the counselor and the donor. Whether it is provided in a fixed location or mobile setting, the venue for donor counseling should provide adequate audio and visual privacy and confidentiality.

Post donation counseling (Cont)

- In the case of a blood donor who has a confirmed TTI reactive result:
- Inform the donor of the result simply and clearly.
- Give the donor time to consider the information.
- Ensure that the donor understands the result.
- Allow the donor to ask questions.
- Help the donor cope with emotions arising from the test result.

Post donation counseling (Cont)

- Inform the donor of the following –
 - Possible routes of infection.
 - The distinction between HIV and AIDS (if the donor was reactive for HIV).
 - The likely progress of the infection.
 - Safe sex practices.
 - Treatment options.
 - Discuss possible disclosure of the result, including when and how this may happen and to whom.
 - Provide information on how to prevent the further transmission of infection.
 - That the donor and his/her sex partner should NEVER donate blood for transfusion purposes in the future.

Post donation counseling (Cont)

- Encourage and offer referral for the testing and counseling of partners and children.
- Arrange a specific date and time for a follow-up visit or referral for treatment, care, counseling, support and other services, as appropriate.

Various blood and blood products in a blood bank (Cont.)

Whole blood

- Blood collected in to CPDA-1 anticoagulant containing bags
- Contains 450ml (+/-10%) of donor blood (blood cells and plasma)
- 63ml of and anticoagulant such as CPD (Citrate, Phosphate, Dextrose)
- Hct 35-45%
- Stored at 2-6 °C
- Shelf life – with CPD 21 days, with CPDA-1 (Adenine) - 35days



Red concentrate / Packed RBC

- Red cells with 1/3 of the original plasma
- Saline solution containing added adenine, glucose and manitol, adsol or optimal additive solution
- 45g of hemoglobin per unit
- Stored at 2-6 0C
- 21-35 days or up to 42 days with added above solutions
- Volume - 250ml
- Hct 55-75%
- Contain RBC, WBC and small amount of plasma

Fresh Frozen Plasma (FFP)

- Plasma removed from RBC within 6-8 hrs of collection is rapidly frozen to below -30°C temperature. Before transfusion is necessary to thaw at 37°C
- Once thawed, there is rapid deterioration of clotting factor, therefore it is very important to use the immediately after thawing
- Dose – 10-12ml by weight
- Shelf life – 12 months
- Stored at $< -30^{\circ}\text{C}$



Platelet Rich Plasma

- Gentle centrifugation of whole blood
- Supernatant transferred to the 2nd bag

Platelet concentrate

- Prepared from PRP by 2nd centrifugation
- Removal of all but 50ml of plasma
- Contain approximately $\geq 55 \times 10^9$ platelets
- 60-80% platelets present in whole blood unit
- Volume - 300ml
- Stored at 20-24°C
- Shelf life - 5 days



wiseGEEK

Cryoprecipitate

- Volume - 15ml bags, usual dose of 4-6bags
- Stored at $< -25^{\circ}\text{C}$
- Shelf life - Up to 1 year



Other products

- Immunoglobulin
- Albumin
- Coagulation factor concentrate