

Donor selection criteria

- Questionnaire about illness.
- Demographic information & consent for blood donation
- Physical examination
- Simple laboratory tests
- Examination of various parameters
- Trained staff
- Controlled and validated methods
- Calibrated and maintained equipment
- Controlled materials
- All activities and outcomes are documented
- Monitoring and evaluation

Medical history

- Medical history should be taken by trained health care professional
- It must be assured that the confidentiality of the donor should be maintained
- Direct questions or leading questions are allowed in the interview
- Male donors: have you had sex with another male ever?
- Female donors: have you had sex with a male who has had sex, even one time, with another man?
- Have you ever taken clotting factor for bleeding disorder?
- Have you had a positive test for HIV/AIDS?
- Are you giving blood to be tested for HIV/AIDS?
- Have you had any symptoms of HIV/AIDS or weight loss?

Physical Examination

- General appearance of donor
- Determination of hemoglobin
- Autologous donor Hb 11-18 g/dl Hct 33-52%.
- All other type donors Hb 12.5-18 g/dl Hct 38-52%.
- Pulse
60-100 beats/min
- Blood pressure
Diastolic 60-100 mm Hg
Systolic 100-160 mm Hg
Temperature:
Maximum 37.5 °C
Donor weight:
Minimum 45 Kgs

Amount of blood to be drawn

≥ 55 Kg – 450ml

45- 54 Kg – 350ml

Venepuncture:

Inspection of the site of venepuncture

Temperature:

Maximum 37.5 °C

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Venepuncture:

Inspection of the site of venepuncture

Donation interval

- The minimum time gap between two blood donations should be **3 months**
- Interval between two Plateletpheresis is 48- 72hrs. Not more than two procedures to be done in a week.
- Whole blood donation must be deferred for at least **72 hours** after plateletpheresis
- In case of re-infusion failure after pheresis procedure, donor should not donate whole blood **for 3 months**

Donor Deferral on Medical History

Conditions excluded on medical history to protect the health of donor

- Anemia
- Low / high blood pressure at the time of donation
- Heart disease
- Bleeding disorders
- Epilepsy
- Rheumatic fever
- Diabetes Mellitus on Insulin
- Kidney disease
- Pregnancy
- Breast feeding
- Menstrual problems

Temporary Deferral of Donors

Pregnancy or Delivery	6 months post delivery
Abortion	6 months
Breast feeding	Until baby is weaned
Cold, cough, flu,	Until symptoms subside
Chronic sinusitis	No deferral unless using antibiotics If taking medication and 1 week after attack
Asthmatics	One week after stopping the treatment and when donor is symptoms free
Acute Renal Infection	

Drug History

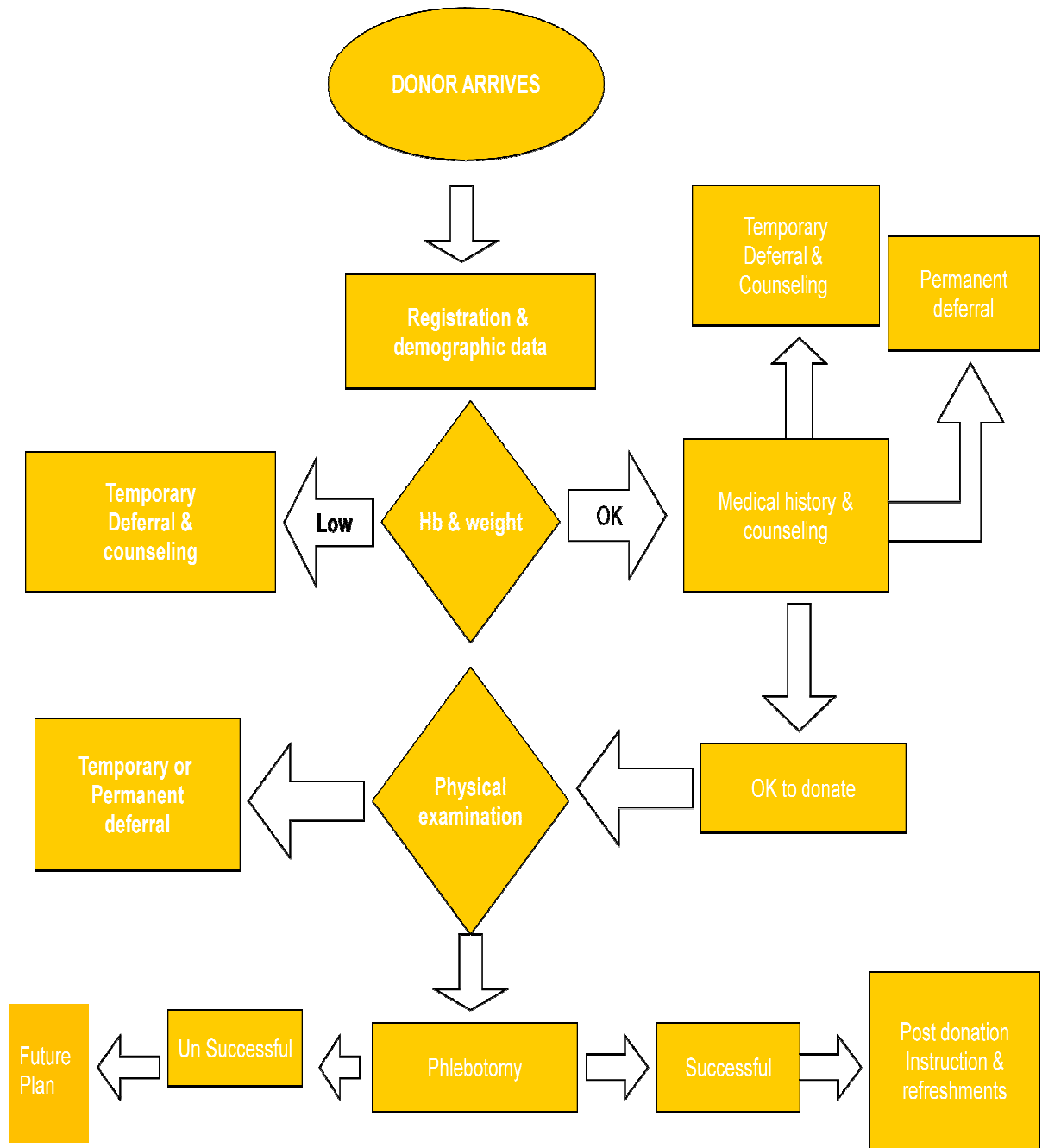
Donors taking :

- Oral contraceptives/ Analgesics (not for platelets)/ Vitamins, mild sedatives, drugs for hypercholesterolemia may be accepted
- Isotretinoin/ Finestrone- **1 month** after last dose
- Cortisone – **7 days** after last dose
- Antibiotics – **3 days** after last dose
- For uncertain medication-Deferral at the discretion of the screening Doctor after taking a detailed history.

Permanent Deferral of Donors

- **Cardio-vascular Diseases**
- **Chronic infection**
- **Ulcer disease (GIT)**
- **Chronic liver disease**
- **Endocrinal disorders**
- **Epilepsy/ Mental/ Neurological disorders**
- **H/o Hepatitis B or C**
- **Any signs/symptoms suggestive of AIDS such as– Unexpected weight loss, Persistent diarrhea, lymphadenopathy >1month**
- **Chronic infectious disease: TB, Leprosy**
- **Any H/o a Bleeding Disorder**
- **H/o Cancer**
- **Polycythaemia vera**
- **G6PD deficiency**
- **Thalassemia/ Sickle cell anaemia. (thalassemia trait may be accepted)**
- **Drug History Donors taking:**
 - **Anti-arrhythmics, anticonvulsants, anticoagulants, cytotoxic drugs.**

Blood Collection Flow Chart



Types Blood Donors

- Voluntary Donors –Donate Blood on their own
- Replacement Donors : from within the patient’s own family or friends
- Antilogous Blood Donors -A patient who donates his/her own blood for self
- Aphaeresis Donors- Donation of blood components through the process of cell separation
- Professional Donors- legally banned in India
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Principles of blood donor recruitment

- **Highlighting the importance of voluntary non-remunerated donation**
- **Continued motivation and education of potential donors**
- **Involving important public figures and community leaders in education program**
- **Retention of safe donors**
- **Organizing donor recruitment campaigns on a continuous basis**

Why donors donate again

- **Good habit**
- **Altruism**
- **Sense of self satisfaction**
- **Record purpose**
- **On regular call**
- **Non-availability- Rare Group**
- **Knows the value of blood donation**
- **Respect and popularity**
- **Personal health checkup**

ABO Blood Groups

- Most well known & clinically important blood group system.
- Discovered by Karl Landsteiner in 1900
- It was the first to be identified and is the most significant for transfusion practice
- It is the **ONLY** system that the reciprocal antibodies are consistently and predictably present in the sera of people who have had no exposure to human red cells
- ABO blood group consist of
 - two antigens (A & B) on the surface of the RBCs
 - two antibodies in the plasma (anti-A & anti-B)

Development at birth

- All the ABH antigens develop as early as day 37 of fetal life but do not increase very much in strength during gestational period
- Red cell of newborn carry 25-50 % of number of antigenic sites found on adult RBC
- Although cord red cells can be ABO grouped, the reactions may be a bit weaker than expected
- A or B antigen expression fully developed at 2-4 yrs of age and remain constant throughout life

Expression of ABO Antigens

- Although the ABO blood group antigens are regarded as RBC antigens, they are actually expressed on a wide variety of human tissues and are present on most epithelial and endothelial cells
- ABH antigens are not only found in humans, but also in various organisms such as bacteria, plants, and animals
- Present both on red blood cells and in secretions only in humans and some of the apes (chimpanzee, gorilla)
- In all other mammalian species these substances are found only in secretions

Anti-A and anti-B antibodies

- Not present in the newborn, appear in the first years of life (4-6 months usually), reach adult level at 5-10 years of age, decreases in elderly
- Naturally occurring as they do not need any antigenic stimulus
- However, some food & environmental antigens (bacterial, viral or plant antigens) are similar enough to A and B glycoprotein antigens and may stimulate antibody development
- Immunocompetent person react to these antigens by producing antibodies to those absent from their own system

- Usually IgM, which are not able to pass through the placenta to the fetal blood circulation
 - Anti-A titer from group O > Anti-A titer from group B
 - Anti-A titer from group B > Anti-B titer from group A

Why is blood so important?

- Blood is the life-line of the body as it is the carrier of life sustaining oxygen from lungs to other parts of the body.
- It can be replaced by transfusing blood; a unit of blood can save an otherwise doomed life.
- There is no substitute for blood.

“Donation of blood is a gift of life to the receiver”

Why Voluntary Donors are the BEST CHOICE

- They have a **high sense of social and moral responsibility** to the society.
- They are **not under pressure** to donate blood therefore answer all the questions asked during screening procedure truthfully.
- They have a **greater awareness** of blood “Safe blood” and are more likely to free of transfusion-transmitted diseases.
- They are more willing to donate on a regular basis.
- Voluntary Donors are **held in very high esteem** Nationally & Internationally.
- 7th April 2000-(W.H.O.) Day of voluntary Blood Donors
“Safe Blood Starts with me”
- 7th April 2001-International day for volunteers
Volunteer blood donor 1st

Professional Donors- Banned

- Donate blood to receiving money.
- Poor, under nourished, at risk of transmitting transfusion transmitted diseases.
- “Under Donor”.” Unsafe Blood

Various organisations that can be approached for this noble cause

- 'Religious' organisations
- Educational institutions
- Business communications
- Govt / Semi Govt / Pvt organisations
- Medical organisations
- Welfare organisations
- Press / telecommunications
- Special days – National Holidays
 - Fixed memory days – founder's days
 - Birth /death anniversaries
- Special groups – Sportsman cricketers /Actors singers /Farm Association club
- Political organisation

Planning prior to holding a blood donation camp

- i. Acquaintance with the background of organisations
 - Educational Institution
 - Religious organisations
 - Social organisation
 - Govt organisation
- ii. Written letter from organisation with
 - Date – Foundation days
 - Time - Crucial for the team to reach the venue in time
 - Season during the year
 - Level if multistoreyed
 - Venue – Outdoor
 - Indoor
 - Approximate no. of donor – mega blood donation camps are generally discouraged
- iii. Instructions to the organiser regarding arrangements for blood donation camp
 - ❖ Site of the camp – easy accessibility
 - ❖ Open, well ventilated , lighted
 - ❖ Cooler/fans – summers
 - ❖ Room heaters – in winters
 - ❖ Segregation of the site in to
 - ❖ Pre donation area
 - ❖ Donation area
 - ❖ Post donation area
 - ❖ Provide organisers with the requisite motivational material
 - ❖ Donor eligibility criteria hand outs