



PROCEDURE FOR BLOOD DONOR REGISTRATION AND ITS SCREENING

Pathology

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ABSTRACT

The donor selection is the first and one of the most important steps for obtaining a good component or product for the patients. The recovery of patient is directly associated with the quality of blood transfused hence the donors needs to be physically fit in every aspect. He should have minimum 45 kg of body weight in order to donate 350 ml of weight, and 60 kg of body weight to donate 450 ml of blood. The Hemoglobin of the blood donor should be minimum 12.5 gm/dl. After the process of blood donation completed, the blood bag is kept at vertical position for minimum two hours and then it is separated to various components, like PRBC, Plasma, and Platelets. The quality of components made is directly associated with the blood of the donor selected. As per the WHO norms the donation is done on exchange basis, donors should be preferably relative of patient or close acquaintance of patient and should be healthy in all aspect, no professional donors should be entertained or encouraged. Every blood bag should be thoroughly screened before being transfused. Donor should qualify all norms laid down by WHO, and high quality of testing procedures should be used in order to obtain high standard testing results. The donor selection includes donor registration, clinical examination, which comprises of physical health checkup and donor questionnaire or the medical history.

KEYWORDS

Donor, Registration, WHO, Health, Checkup, Medical history, Deferred, Accepted, Methods, Donor Screening

INTRODUCTION:

The purpose of donor registration is to obtain complete demographic information about prospective blood donor. This helps in identifying the donor as it is extremely important because it serves to provide both identification of the source of the blood product and recall information for future donation. This process also helps us in assessing whether the donor is fully fit to donate blood because any wrong information given by donor can cause some serious problem to blood donor.

Material:

The material used are:

- Donor's Selection & Registration Form.
- Pens. [1,2]

Method:

Whenever a prospective donor comes to the blood bank, he / she is greeted with pleasant smile and asked to sit down comfortably.

- He / she is offered a glass of water and asked to relax.
- He is given the Donor selection and registration form according to the language he prefers i.e., Hindi or English and asked to fill.
- If he / she has any difficulty in filling up the form; the attending receptionist clarifies it and assists the donor in filling up the form completely.
- The particulars of the donors are entered in the computer format at reception counter. [1,2]

CLINICAL EXAMINATION:

1. PHYSICAL HEALTH CHECK UP:

The physical examination begins by observing the prospective donor's general appearance. The donor should be in good health, mentally alert and physically fit Hemoglobin, weight and height are first to be observed. Pulse, blood pressure, temperature, and local skin examination on phlebotomy site are checked later.

- **Hemoglobin:** Hemoglobin level for whole blood donation must be 12.5g/dl (125 g/l) or greater and hematocrit must be 38 per cent (0.38).
- **Pulse:** The pulse donor should be between 60 and 100 beats per minutes and regular. If the donor is an athlete, a lower pulse may be accepted. Pulse should be taken for at least 30 second.
- **Blood Pressure:** Systolic and diastolic blood pressure should be within normal limits with or without medication (systolic-100-180 mm of Hg. Diastolic-50-100 mm of Hg.)
- **Temperature:** Oral temperature must not exceed 37.5°C (99.5°F).
- **Donor weight:** To avoid acute hypovolemic reactions from donation, the potential donor must weight a minimum of 45 Kg for donating 350 ml of blood, and 60 kg for donating of 450 ml of blood
- The donor should be free from any skin disease at the site of phlebotomy.
- The arm and forearm of the donor should be free from skin punctures or scars indicative of professional donors or addiction of self-injected narcotics. [1,2]

2. MEDICAL HISTORY:

Following medical history questions are asked for whole blood donation. **The expected answer for all questions except first three ones should be "No."** Discuss the answer with the potential donor to a greater extent if an unexpected Yes answer received [2]

- Are you in good health today? Do you feel well?
- Have you had your meal today?
- Did you sleep well last night?
- Do you have disease of the heart, lung, liver, kidney, stomach or bleeding tendency?
- Have you ever had cancer/tumor?
- Have you ever had malaria in the last three months?
- Have you ever had jaundice?
- Do you suffer from or have suffered from tuberculosis?
- Are you suffering from common cold, fever?
- Have you ever had close contact with a person having hepatitis B, HIV in last twelve months?

Do you suffer from or have suffered from?

- Sexually transmitted disease: HIV/syphilis?
- Diabetes?
- Blood pressure?
- Unexplained weight loss?
- Epilepsy?

Are you taking or have taken any of these in the past 72 hours?

- Alcohol
- Antibiotics
- Aspirin
- Steroid
- Ayurvedic medicine
- Homeopathic medicine

Etretinate (tegison) for psoriasis and Acitretin in past three year.

1. Do you have any drug addiction?
2. Have received dose of any vaccination?
3. Have you had any serious illness or surgery in past one year?
4. Have you had any dental surgery in last three days?
5. Have you had your ear pierced, a tattoo or acupuncture in last 12 months?
6. Have you ever received a transfusion of blood or any blood component? If yes, When?
7. In last three months have you donated blood or blood component?
7. For women only:

- Are you pregnant or have been pregnant in last one year?
- Any abortion in last six months?
- Are you lactating/breast feeding?
- Recent childbirth within six months? [1,2]

Upon successful completion of these three interrelated but separate

parts, the donor advances to actual phlebotomy.

The donor screening process has one of three outcomes for the prospective donor:

- 1) Acceptance 2) Temporary deferral 3) Permanent deferral.
 - Accepted donors continue on, in the donation process.
 - Temporary deferred donors are advised on how long they must wait before trying to donate again.
 - They are also advised that what they should do to increase their chances of acceptance after the waiting period is over. For example, if donor's hemoglobin is too low to allow the donor to safely donate, the donor is advised how to increase the hemoglobin level through dietary changes.
 - Permanent deferral is given to those people who cannot be accepted a blood donor under any circumstances.
 - The history and physical examination must take place on the day of actual donation. [1,2]

Donor needs certain information

1. Accurate but generally understandable educational materials about the essential nature of blood, the products derived from it, and the important benefits to patients/'donors of blood donation.
2. The reason for requiring a medical history, physical examination and the testing of the donations; information on the risk of infectious diseases that may be transmitted by blood and blood products; the significance of informed consent and temporary and permanent deferral.
3. Information about protection of personal data: No unauthorized disclosure of the name of the donor, of information concerning his health and of the results of the test performed.
4. The reason why they should not donate, which may be detrimental to their own health.
5. The reason why they should not donate, which puts recipient at risk, such as unsafe sexual behavior, hepatitis, drug addiction and the abuse of drugs.
6. The option of changing their mind about donating prior to proceeding further without any undue embarrassment or discomfort.
7. Information on the possibility of withdrawing or self-deferring at any time during the donation process.
8. The opportunity to ask the question at any time.
9. Undertaking that if test results show evidence of any pathology, they will be contacted by the blood collection Centre. [1,2,3]

CONCLUSION:

If nothing abnormal has been found in the prospective donor's history and medical examination, the final step just prior to donation is the informed consent process. The donor record includes the signed statement of donor countersigned by phlebotomist and consultant that acknowledges the informed consent process.

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- 1) Transfusion Medicine Technical manual ED. R.K SARAN, 2nd edition.
- 2) Compendium of Transfusion medicine by Dr R.N Makroo.
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