NATIONAL BLOOD TRANSFUSION SERVICE

THE SELECTION, MEDICAL EXAMINATION, AND CARE OF BLOOD DONORS.

Selection and Medical Examination of Donors

1. Donors should be healthy persons of either sex between 18 and 65 years of age. Parental consent should be obtained before donors under 21 years of age are bled. The removal of 420-440 c.cm. of blood from such healthy persons has, in general, no deleterious effect on health or resistance to disease, and only a temporary effect, rapidly recovered from, on the circulation. The decision whether a person is fit to act as a blood donor rests solely with the doctor who is to collect the blood.

2. (a) The medical examination to which the donor is subjected must, therefore, determine whether the donor is in normal health. Of this the donor is the best judge, and if he will truthfully answer simple questions concerning his medical history and general health, the main part of the medical examination has been done. The donor should thus be subjected to a short series of questions about his present health and medical history, designed to satisfy the medical officer that -

(i) he is in normal health;

(ii) he is not suffering from, and has not recently suffered from, intercurrent infection (e.g., tonsillitis, laryngitis, boils, etc.) and has not been in contact with any case of infectious disease;

(iii) he has not recently suffered from any serious illness.

These questions should be asked each time the donor is bled.

(b) At enrolment donors should be specifically questioned about the following diseases:-

Tuberculosis	Malaria
Epilepsy	Diabetes
Stroke	Goitre
Hypertension	Kidney disease
Anaemia	Heart disease

Jaundice or Hepatitis

Persons with a history or evidence of these conditions should be accepted, deferred, or rejected after consideration. Blood from those who have had malaria may only be used for the preparation of plasma. A person who has had jaundice or hepatitis within the previous 12 months should not be accepted as a donor.

A written record of the answers regarding these diseases is desirable. It should be initialled or signed by the donor, or the clinic clerk taking the medical history if the donor's signature is not for some reason obtained. In practice, a simple method of recording the answers has been found to be the completion of the "medical history box" on the donor registration card (N.B.T.S.101) at the time of enrolment of the donor, or when he presents himself to give blood for the first time, the entry in the "box" being initialled by the donor (or clerk). On subsequent occasions, the donor should be shown a list of the above conditions (e.g., N.B.T.S.110) and asked to sign either this form, which is attached to the donor session work sheets, or the N.B.T.S.101, to show that he has read the list. In general, only persons in normal health with a good medical history should be accepted as donors.

(c) The hypertensive should be treated on his merits. In general, the practice of accepting hypertensives as donors is not recommended, because of the possible complications which may follow a sudden lowering of arterial tension caused by the withdrawal of blood. Such persons should not be bled without their own doctor's recommendation in writing, and then only if the medical officer concerned is himself satisfied that they are fit to be bled. It is felt that if

hypertensives are to be bled for the relief of symptoms, they should be bled by the family doctor or in a hospital, preferably the latter, where complications, should they occur, can be dealt with more satisfactorily than at a donor session.

(d) Mothers should not act as donors during pregnancy or until a period of one year has elapsed since the last confinement. In certain circumstances, e.g. to collect serum containing antibodies, mothers may be bled before the elapse of this time, if shown by medical examination to be fit to give blood.

(e) It is not customary to question donors about venereal disease. Information may, however, be volunteered. A person who is known to have, or to have had, syphilis is unacceptable as a donor (see Therapeutic Substances Amendment Regulation, 1948 (Statutory Instrument 1948 No.2418), Eighth Schedule, Pt. 1, para. 1, and Addendum to the British Pharmacopoeia, 1951). An accepted syphilis test shall be performed each time a donor is bled; donors whose blood reacts positively shall be excluded permanently from the donor panel.

3. The medical history should be coupled with a careful assessment of the donor's appearance. The experienced doctor can detect at a glance the potentially unsuitable donor. Those of poor physique, the debilitated, the undernourished and underweighted, the mentally unstable, and those bearing the obvious stigmata of disease should not be bled.

4. The haemoglobin should be determined each time the donor presents himself. Those with less than 12.5 grms.% (85% haemoglobin (Haldane scale)) should not be bled. The type of test is left to the discretion of the Regional Transfusion Directors, but the Phillips-Van Slyke copper sulphate method (1945) is recommended for use as a screen test. Those donors whose haemoglobin is below 12.5 grms.% (85% Haldane scale) should be informed that they are not fit to be bled at present. In these cases, it may be advisable and helpful, if a screen test has been used, to take a sample of blood and preferably also a blood film for an exact determination of the haemoglobin level and, if possible, red blood cell count, etc., the result of which may, at the Regional Transfusion Director's discretion, be communicated to the donor, with the advice that he should consult his own doctor.

5. The superficial medical examination (auscultation and percussion of the chest, pulse, and blood pressure) is, in general, so incomplete and unrevealing that it is in most cases not of great value. In some cases, particularly in middle-aged and older donors, examination of the pulse may reveal unsuspected defects of the cardiovascular system, which may be confirmed by measurement of the blood pressure. While it is usually sufficient to rely on a normal medical history, general appearance, and haemoglobin level, it is advisable to examine the pulse and, if considered necessary, the blood pressure in these older donors.

6. The complete medical examination, to include X-ray examination, electrocardiogram, haematological examination, etc., is obviously impracticable.

Summary

1. All donors should be healthy persons of either sex between 18 and 65 years of age. Parental consent should be obtained before donors under 21 years of age are bled.

2. The medical examination should consist of:-

(a) A short series of questions designed to reveal the donor's present state of health and his medical history. The new donor should be asked specific questions regarding certain diseases, mentioned above.

(b) An assessment of his general appearance, together with an examination of the pulse and blood pressure in certain donors.

(c) A haemoglobin determination. Donors whose haemoglobin is below 12.5 grms.% (85% Haldane scale) should not be bled; they should be informed that they are not fit to give blood at the present time and advised to visit their own doctor, if the medical officer considers this necessary.

3. The above procedure should be carried out meticulously. It is one of the most wearing parts of the routine collection of blood, but, if skilfully used, will lead to the rejection or deferment of donors unfit to be bled. When in doubt, it is better to reject or defer. The medical officer should see that an appropriate entry is made upon the donor's record card.

Medical Care of Donors

Apart from courteous and considerate treatment by all members of the blood collecting team, the donor's medical well-being should be assiduously watched by the medical officer and the members of the team while he is at a blood donor session.

The donor's medical well-being depends upon:-

(a) The use of carefully prepared sterile apparatus.

(b) An immaculate technique of venepuncture. Sterilisation of the skin should be carried out by a well-tried method, such as that described in M.R.C. War Memorandum No. 1, 2nd Edition.

(c) Skilfully performed venepuncture preceded by the injection of a local anaesthetic. Normally, not more than 440 c.cm. of blood should be withdrawn. No matter how skilled the doctor he will occasionally "miss" a vein. Further attempts should not be made without the donor's permission. It is usually not advisable to use the other, arm, unless there is some special reason for making another attempt. In factories, it is good policy never to use the other arm.

(d) The enforcement of a definite routine upon the donor during the resting period after withdrawal of blood. This resting period is of special significance in regard to the prevention of the "delayed faint" (see below).

1. A donor attendant should assist the donor to the rest room, where he should lie recumbent for at least 15 minutes by the clock, after which he should sit up for at least 5 minutes.

2. During the resting period of 20 minutes, the donor should consume at least one cup of fluid and a few biscuits.

3. Before the donor leaves, the site of venepuncture should be inspected, preferably by the doctor, who will on occasion be able to forestall complaints from a donor by warning him that his arm will become bruised from a haematoma, etc. A form of dressing should be placed over the venepuncture. The donor may be given tabs. ferrous sulphate gr. iii, sufficient for 7 days, if the medical officer considers this desirable. It is not intended that the practice of issuing iron tablets to all donors, which is customary in some regions, should cease.

4. Small cards (specimen attached), giving advice to donors, should be displayed in the rest room.

(e) The immediate and considerate treatment of those who faint. A proportion of donors, variously estimated at 2-5% faint. This is usually only a transient matter, quickly recovered from, but in a few instances prolonged and troublesome. The "delayed" faint is the potentially dangerous type, since the donor may be in the street or at work. Fainting is probably psychological in origin and cannot be forecast by the most elaborate medical examination.

The importance of these measures and the reasons for them must be carefully impressed upon the lay members of the bleeding team. The reputation of the National Blood Transfusion Service and the readiness with which donors will volunteer in the future will depend largely upon the standard of medical care given to the donor.

Donor: Complaints and Accidents

The need for sympathetic, prompt, and thorough investigation af all complaints made by the donors, no matter how trivial, is obvious. Complaints of a medical nature should invariably be investigated by a doctor. The following routine, which has proved of value in practice, is recommended:-

1. Minor accidents and any untoward incidents occurring during a blood collecting session, e.g., haematoma, fainting, damage to or loss of, a donor's property, should be noted at the time upon the donor's record card. The recording of apparently trivial incidents has, in practice, proved of value as long as two years later.

2. Serious incidents or accidents occurring during blood collecting sessions, or complaints made direct to the regional transfusion centre, should be recorded in a book kept for the purpose, together with full notes of the investigation made.

An analysis of complaints and accidents thus recorded should be made annually, using the following headings:-

Haematoma, cellulitis, thrombosis, accidents due to fainting, dermatitis, unclassified, total: ratio to total number of donors bled: number of accidents serious enough to merit financial compensation, together with, if available, the amount of compensation paid.