

MEDICAL EXAMINATION AND CARE OF DONORS.

With the establishment of a National Blood Transfusion Service, it is desirable that there should be a definite policy on the medical examination and care of voluntary blood donors, which should be punctiliously followed in all regional transfusion centres.

Medical Examination of Donors.

1. Donors should be healthy persons of either sex between 18-65 years of age. Parental consent should be obtained before donors under 21 years of age are bled. The removal of 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. 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.

2. 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 he is in normal health and has not recently suffered from any serious or debilitating illness (e.g., jaundice within the previous six months). These questions should be asked by the medical officer each time the donor presents himself. The effectiveness of this medical questionnaire can be increased by instructing the receptionist and donor attendants to ask all donors tactfully and unobtrusively if they have been quite well, or if they have been receiving medical attention recently.

The donor presenting himself for the first time should also be asked specific questions about the following diseases:-

Tuberculosis	Malaria	Kidney disease
Epilepsy	Diabetes	Heart disease
Cancer	Goitre	Anaemia
Jaundice (within the last 6 months)		

Persons with a history or evidence of these conditions should be accepted, deferred, or rejected after consideration. A written record of the answers to these questions, initialled or signed by the donor, is desirable, and recommendations as to how this should be made are being drawn up. In general, it is the policy of the Transfusion Service to accept as donors only persons in normal health with a good medical history.

The hypertensive should be treated on his merits. In general, the practice of bleeding hyperplastic donors is not recommended, because of the possible complications which may follow a sudden lowering of arterial tension. They 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.

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

4. In addition, the haemoglobin should be determined each time the donor presents himself. Those with less than 80% haemoglobin (Haldane scale) should not be bled. The type of test is left to the discretion of the Regional Transfusion Officers, but the Phillips-Van Slyke copper sulphate method (1945) is recommended for use as a screen test. Those donors whose haemoglobin is below 80% (Haldane scale) should be informed that they are not fit to be bled at present. In certain cases, it may be advisable and helpful, if a screen test has been used, to take a sample of blood from rejected donors for an exact determination of the haemoglobin level, and, if possible, red blood cell count, etc., the results of which may, at the Regional Blood Transfusion Officer'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 will 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 80% (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 wearying parts of the bleeding routine, 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 in the transfusion centre.

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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. Less than 440 c.cm., or occasionally none, should be withdrawn from persons who are underweight or of small stature, the medical officer using his discretion in deciding how much should be removed. Incompletely filled bottles are of value in children's hospitals, etc. No matter how skilled the medical officer, 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 the donor is particularly anxious that this should be done. 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.
 - 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 by the medical officer, 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. The donor should 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) Donors who faint should receive immediate and considerate attention and be screened from the others.

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 N.B.T.S. and the readiness with which donors will volunteer in the future will depend largely upon the standard of medical care given to the donor.

Donors: Complaints and Accidents.

The need for sympathetic, prompt, and thorough investigation of all complaints made by the donors, no matter how trivial, is obvious. The following routine, which has proved of value in practice, is recommended:-

- 1. Minor accidents and any untoward accidents 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 such apparently trivial incidents has, in practice, proved of value as long as two years later.

2. Serious incidents or accidents occurring during bleeding 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 any investigations made.

An analysis of complaints and accidents thus recorded should be made, using the following headings, and attached to the annual progress report:-

Haematoma, cellulitis, thrombosis, accidents due to fainting, dermatitis, unclassified; total. Ratio to total number of donors bled. The number of accidents serious enough to merit financial compensation should be shown, together with, if available, the amount of compensation paid.