NORTH LONDON BLOOD TRANSFUSION CENTRE

GUIDANCE FOR THE SELECTION, MEDICAL EXAMINATION AND CARE OF BLOOD DONORS

Compiled 1985

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To be read in conjunction with the Mobile Teams Procedure Manual.

Contents

SECTION 1 - SELECTION OF DONORS

1. THE DECISION WHETHER OR NOT A PERSON IS FIT TO GIVE BLOOD RESTS FINALLY WITH THE DOCTOR HAVING DUE REGARD FOR THE WELFARE OF DONORS AND THE SAFETY OF RECIPIENTS. PARTICULAR CARE SHOULD BE EXERCISED WITH ALL OLDER DONORS. Patients referred for therapeutic venesection should not be accepted at donor sessions.

2. AGE Donors should be healthy people of either sex over 18 years of age. New donors will be welcome up to the age of 60, regular donors can continue to donate until their 66th birthday. A "new" donor is either a first-time donor, or one whose last donation was given more than 6 years previously. Where a regular donor is called, or attends to give a donation shortly after the 66th birthday, then it is far better to accept the donation, providing the donor is fit and otherwise eligible, than to refuse and upset a longstanding faithful donor. The M.O. must use his/her discretion in these cases, but if a donor has been called then there must be a very good reason to refuse the donation.

3. WEIGHT Healthy people can generally donate up to 450 ml of blood (plus small laboratory samples) without any deleterious effect on their health or resistance to disease, and with only a temporary effect on the circulation from which recovery is rapid. Ideally donors should have eaten within a few hours prior to donation. There is no good evidence that donors are more likely to faint if they have not eaten, but staff firmly believe this is so! Therefore it is best to ask such a donor to have a drink and some biscuits. Nervous first-time donors and/or first-time donors who have not eaten all day and who attend late in the day should probably be diplomatically discouraged from donation that day and asked to return earlier in the next session, in case of a faint and delayed recovery. Potential donors who are under 47 kg (7 1/2 stone) body weight are more likely than others to faint or suffer other adverse reactions to normal blood donation. New donors who weigh less than 47 kg may be accepted and bled into Paedipacks (250 ml donation). The minimum weight is 41 kg (6 1/2 stone). Donors should be assessed carefully to ensure that the low weight is not due to illness. "Underweight" donors (i.e. weighing less than 47 kg) who have previously given full donations (minimum of 410 ml blood) without ill effects should continue to give such donations and should not be bled into Paedipacks.

4. INTERVAL BETWEEN DONATIONS It is the policy of the Service to maintain donor panels at a size which ordinarily will not require donors to give more than 2 donations in a year (min. interval 21 weeks). Any donor (male or female) who recurrently fails the haemoglobin test should be critically reviewed with regard to future donation. At static clinics male donors may be accepted at 12 week intervals providing the Hb is >13.5 g/dl at each donation, but females whose Hb is between 12.5 and 13.5 g/dl should not be bled regularly more often than every 21 weeks. Donors who have given white cell or platelet donations on cell separators may be accepted for whole blood donation after an interval of 2 weeks.

On occasions the booking of mobile clinics necessitates the call-up of donors one or two weeks before the 21 week minimum interval. In these circumstances there will be a covering letter from the Donor Organiser indicating that early attendance by these donors has been authorised by a Consultant. Providing that such an occasion is infrequent and that the Hb level of the donor is >13.5 g/dl (male) or >12.5 g/dl (female) there will be no harm to the donor of one donation given slightly earlier than 21 weeks from the last donation. If a donor attends a mobile clinic before the 21 week interval has elapsed (but has not been called) he/she should be accepted providing the Hb level is >13.5 g/dl (male) and >12.5 g/dl (female) and that at least 12 weeks have elapsed since the last donation. In these circumstances it should be explained to the donor that this is not the routine policy and that an exception is being made on this occasion only. In future, the donor should adhere to the 21 week interval, in order to protect against iron deficiency.

5. HAZARDOUS OCCUPATIONS Arrangements for sessions at factories should take account of the type of work being performed . At all sessions special note should be taken by the Medical Officer of the occupation of the donor and any hazardous hobbies; donors should be advised to postpone donation if in the next few hours they will be working as civil air crew (other than pilots), a train or bus driver, heavy machinery or crane operator, or will be climbing ladders or scaffolding, diving, etc; or taking part in hazardous hobbies such as motor car or cycle racing, climbing etc. Donors intending to participate in hard sport should be advised to wait for 24 hours after donation. Queen's Regulations for the Royal Air Force para. 900 (28.1.76) state that aircrew personnel, RAF or WRAF, whether trained or under training are ineligible to act as blood donors except in emergency. The donation of blood by aircrew will normally entail their removal from flying duties for seven days. Many commercial airlines also operate this seven day period for pilots. It therefore seems sensible for the sake of consistency to advise all potential donors who will be piloting aircraft either as a hobby (gliding, power flying) or as their occupation that a seven day period should elapse after blood donation before acting as a pilot of aircraft.

6. ALL DONORS SHOULD BE ASKED TO READ THE NOTICES AND AIDS LEAFLET Where a donor is unable to read, either because of illiteracy or poor eyesight, then the Medical Officer should personally ensure the contents of the AIDS leaflet are explained to the donor. Individuals who are clearly suffering from mental subnormality and are judged not to be capable of giving a valid consent to testing of their blood should ideally not donate blood, although there may be circumstances when the Medical Officer considers that it is preferable to allow such a donation. In this situation a note explaining the circumstances should be sent to a Consultant at the Centre.

SECTION II - MEDICAL EXAMINATION OF DONORS

MEDICAL HISTORY

A donor is the best judge of his or her fitness, and truthful answers to simple questions about his or her medical history and general health form a large part of the assessment.

The donor should read the list of conditions displayed at the reception desk and be asked (by the donor session receptionist) to sign the form (NBTS 110). Any conditions declared which are of relevance to blood donation should be recorded by the Medical Officer on the donor record card. Reception staff and Donor Attendants must not write any "medical" details on the card. Confidential information should not be entered on the record card, but forwarded in a separate covering letter to the Centre to a Consultant or Dr Barbara (as appropriate). Donors, both male and female, whose serum or plasma is to be used only for laboratory purposes because it contains anti-Rh, anti-HLA, etc should be submitted to the same routine as other donors, but because the blood is not going to be transfused some decisions, especially about temporary deferment, may be modified, e.g. treatment with certain tablets, or an attack of hay fever need not disqualify, etc. All such donors should be informed that their blood is to be used in this way and their agreement should be obtained. In these circumstances, women may be asked to donate within the recommended time since confinement, if shown by medical examination to be fit to give blood. Such individuals will usually be asked to donate by plasmapheresis, and will therefore be bled at the static clinics.

Individuals who attend a session and give the information that they have been referred by their doctor for a specialist opinion, or who are currently undergoing investigations, should be deferred. Even if perfectly well and asymptomatic they should be advised not to donate blood until tests are complete. If further information may be required from the GP/Hospital Consultant, the donor shoule be asked to sign a form giving permission for the Centre to ask for further medical details. Such forms are available at the sessions.

A more detailed list follows of conditions which may affect actions taken with a particular donor;-whether to accept a donation, to refer the donor to the Medical Officer, or to decline their offer permanently. Any donor not accepted because of one of the conditions listed will be referred to the Medical Officer.

N.B. Abbreviations for 101 cards
O withdrawal of donor from panel
faint with convulsion (do not write "fit" on card)

CONDITION	ACTION	COMMENT
Abortion, (see pregnancy)	Wait	Gestation > 6/12 - wait 1 year Gestation < 6/12 - wait 6 months
Accident, minor	Wait	3 months
Accident, major	Wait	6 months

Acupuncture - performed by a registered medical practitioner	Accept		
- performed by others	Refer to MO	Wait 6 months see note P 12	
AIDS	Refer to MO	See note P 11	
Allergy, including desensitising injections	Refer to MO	See note P 12	
Anaemia	Refer to MO	See note P 12	
Ankylosing Spondylitis	Refer to MO	See note P 12	
Angio-oedema	Reject	Permanent	
Blood donation within 3 months	Wait		
Blood transfusion in last 6 months	Refer to MO	Wait 6 months	
Brucellosis	Disqualify	Permanent	
Cancer	Disqualify	Permanent	The only exception is basal cell carcinoma of the skin (rodent ulcer) Once treatment is complete a donor with a history of rodent ulcer may be accepted (allow 6 months after cessation of therapy).
Christmas disease (Factor IX deficiency)	Refer to MO	See note P 13 (Haemophilia)	
Coeliac disease	Refer to MO	Diet only - accept Any other therapy, or any doubt ask for consent to contact GP.	
Cone biopsy	Accept	Providing no other therapy (other than laser treatment)	
Contact with infectious fevers	Wait	For duration of incubation period - 4 weeks if this is unknown (See note - P 15).	
Contraceptives - oral, the "pill"	Accept		
Creutzfeld - Jakob disease	Disqualify	Permanent	

Crohns disease	Disqualify	Permanent
Dental treatment	Refer to MO	Defer 24 hours (because of possible bacteraemia) Complicated Surgery as an in-patient - 3 months
Diabetes mellitus	Refer to MO	Diet only - accept Oral hypoglycaemics, insulin therapy - disqualify (See note - P 13)
Drug abuse	Disqualify	
Drugs - prescribed by Dr - self-medication (eg aspirin)	Refer to MO	See note P 29-30
Ear-piercing, - see piercing of ears etc	Wait	6 months see note P 12
Electrolysis	Wait	6 months see note P 12
Epilepsy	Refer to MO	See note P 13
Fractures	Refer to MO	If donors are wearing plaster casts on arm or leg defer (in case of a faint and further injury!).
Gastrectomy	Refer to MO	Partial or total gastrectomy -disqualify Vagotomy + drainage - Accept (See note P 13)
General anaesthetic	Wait	3 months (in view of underlying condition) - if for simple dental extraction then 24 hrs
Genital herpes	Refer to MO	See note (venereal diseases - P 17)
Glandular Fever	Wait	2 years
Gout	Refer to MO	See note P 13
Haemophiliacs and their sexual contacts	Refer to MO	Reject - see note P 11,13
Haemophiliacs - family members	Refer to MO	See note P 13
Hay fever	Refer to MO	Mild or occasional attacks - Accept Frequent, severe attacks - Reject - see note P 12
Heart disease	Disqualify	See note P 18

Heart operations	Refer to MO	See note P 13
Hepatitis	Wait	12 months - see note P 14
Herpes simplex (cold sore)	Refer to MO	Accept once lesions are beginning to crust
Hereditary Hb disorders	Refer to MO	See note P 12 (anaemia), P 16
High blood pressure	Refer to MO	See note P 15
Homosexuals	Refer to MO	See note (AIDS - P 11)
Huntingdon's Chorea (family history)	Accept	Providing donor is perfectly fit
Infections - boils, sore throat etc	Wait	Until recovered
Infectious fevers - recent measles mumps etc	Refer to MO	See note P 15, 20
Infectious mononucleosis	Wait	2 years - see note P 16
Inoculations	Wait	See note P 15-16
ITP (I diopathic thrombocytopaenic purpura)	Disqualify	Permanent
Jaundice	Defer	12 months See Hepatitis P 14-15
Kidney disease	Refer to MO	See note P 18
Legionnaire's Disease	Wait	12 months
Malaria	Refer to MO	See note P 21
Malignant disease	Disqualify	Permanent
Meningitis	Defer	Until 1 year after attack
Multiple sclerosis	Disqualify	Permanent
Peptic ulcer - on active therapy	Wait	6 months after completion of treatment
- past history, no regular therapy	Accept	
Pernicious anaemia	Disqualify	Permanent
Petit mal	Refer to MO	Accept if off all therapy 3 years
Piercing of ears	Wait	6 months

Pneumothorax	Refer to MO	Accept if no underlying chest disease and not recurrent
Pregnancy	Wait	Until the baby is 1 year old
Prostitutes	Refer to MO	See note (AIDS - p.11)
Psoriasis	Accept	Providing skin at venepuncture site is satisfactory, and not on systemic therapy
Pulmonary embolus	Disqualify	Permanent
Raynauds syndrome	Refer to MO	See note P 16
Respiratory tract infections	Wait	Until acute symptoms resolve (see note p.16)
Sarcoidosis	Disqualify	Permanent
Sickle cell trait/disease	Refer to MO	See note P 17
Splenectomy - for haematological disease e.g. ITP, Spherocytosis	Refer to MO	Permanent
Stroke	Disqualify	Permanent
Surgery minor e.g. Tonsillectomy Herniorrhaphy Appendicectomy	Wait	3 months
Surgery major e.g. Hysterectomy Cholecystectomy	Wait	6 months
Tattooing	Wait	6 months See note P 12
Thrombosis-	Disqualify	Permanent
Cerebro-vascular (including TIAs)	Disqualify	Permanent
Coronary	Disqualify	Permanent
Deep venous (of calf)	Wait	6 months
Thrombophlebitis - unrelated to venepuncture	Wait	3 months
related to venepuncture	Disqualify	Permanent
repeated episodes	Disqualify	Permanent
Thyroid disease	Refer to MO	Hypothyroidism on stable dose of thyroxine-Accept See note P 17
Toxoplasmosis	Refer to MO	2 years (see note - P 17)

Tropical diseases Filariasis Kala azar Leptospirosis Yaws	Disqualify	See note P 26
Other tropical diseases	Refer to MO	See note P 26
Tuberculosis	Refer to MO	See note P 17
Undulant fever	Disqualify	Permanent
Underweight less than 47 kg (7 1/2 st)	Accept	Paedipacks (if first time donor)
less than 41 kg (6 1/2 st)	Reject	
Venereal diseases	Refer to MO	See note P 17
Yellow fever	Refer to MO	See note P 26

1. NOTES ON SOME CONDITIONS WHICH REQUIRE DEFERMENT:-

Aquired Immune Deficiency Syndrome (AIDS)-

Current high risk groups:- (March 1987)
-any male who has had sex with another male on any occasion since 1977.
-people who have lived in or visited Subsaharan Africa since 1977 and have had sex with people living there.
-haemophiliacs, intravenous drug abusers - past or present.
-sexual partners of all the above.
-prostitutes; men who have had sexual contact with female prostitutes within the last 18 months.

None of these groups may be accepted as donors. In the case of Subsaharan Africa (and Haiti), natives of these countries not in any of the above groups may be accepted provided they have left the country for at least 18 months and have not returned for a period of greater than six months in the interim. Donors who worked in these countries but are not natives should be treated similarly. Visitors of less than six months are acceptable as donors, providing there are no other risk factors. Hospital staff involved in caring for AIDS patients, or working in laboratories in hospitals may be accepted, providing there has been no "needlestick" incident involving blood from a patient positive for anti-HIV. Past sexual partners of "high risk" individuals may be accepted 18 months after the last contact.

OUTLINE GUIDE FOR ASSESSING "RISK" DONORS

I HIGH RISK	II MEDIUM TO LOW RISK	III VERY LOW/ NO RISK
1. Sex with another man since 1977	1. Sexual contact with any of Group I which has ceased	1. Lesbians
2. Present or past IV drug user	2. Persons who have lived in Africa for more than 6/12 who are not excluded by I (3)	2. Health care workers
3. Sex with "high risk" individuals in Africa since 1977		3. Emergency service personnel
4. Haemophiliacs		4. Household contacts of sero positives
5. Prostitutes		N.B. For 2 and 3 history of needlestick unjury from infected patient debars
6. Present sexual contacts of any of the above		
PERMANENT DEFERRAL	DEFER 18 MONTHS	ACCEPT

NOTE: Group II (i) Such donors need individual asessment bearing in mind that although the "high risk" contact may not be infected, if they are infected, the more sexual contact there has been, the greater the risk to the prospective donor. We are not a testing centre, and it should be remembered that in accepting donors who consider themselves at risk we are obliging them to have a test which on reflection they may not wish to have.

In the past, when reasonable doubt has been raised about a donor's suitability, then a note may have been placed on the 101 card "Bleed into single pack on B Sheet". At the next donation further investigations can then be carried out before any blood is processed or issued to a hospital.

If a Medical Officer has doubt about a donor's suitability with particular reference to AIDS risk then a covering letter should be sent to Dr. Moore and the donation should be taken into a single pack. If that is not possible and a multiple pack has been used then it should be labelled "Hold - letter to Dr. Moore". No other information should be entered on the label, 101 card, or bleed sheet.

Acupuncture, Ear-piercing, Electrolysis, Tattooing

All these procedures carry a small risk of hepatitis B transmission (there is no evidence of HIV transmission although this could be theoretically possible). Individuals may not donate blood within 6 months of any of these procedures unless it was carried out by a registered medical practitioner. There can be no exceptions to this rule, even if sterile or disposable needles are said to have been used, as in all other cases the procedures are carried out by non-professionals without recognised national standards for training or practice.

Allergy

People who gave a history of frequent and severe allergy symptoms should not be accepted as donors, because of the risk to the recipient of passive transfer of allergy. Mild hay fever, occasional antihistamine treatment, and mild or occasional attacks of asthma, should not be a cause for deferral. Donors receiving desensitising injections should wait until 1 month after the end of the course. Donors who have significant symptoms on the day of donation should be deferred. Individuals who require continual therapy should not be accepted as donors.

Anaemia

If a donor has failed the screening test on two or three recent occasions, it is probably advisable to delay further donations for an extended period. A donor who appears well and passes the Hb test, but declares a history of anaemia attributable to the presence of an abnormal haemoglobin eg sickle cell trait, spherocytosis, thalassaemia trait may be accepted. Most donors with clinically significant red cell abnormalities will not volunteer as donors. Provided the would be donor with a covert red cell abnormality appears well and passes the Hb test, there is little risk to donor or recipients.

Ankylosing spondylitis

If the individual is fit and well - accept. If there is associated systemic disease (e.g. iritis, urethritis) or pulmonary disease or the condition is severe enough to require constant therapy then the individual is disqualified from donation.

Cone Biopsy

Women who have had a cone biopsy but no other therapy may be accepted as donors, even if still under periodic review. If any additional therapy was given (eg further surgery or radiotherapy), then the donor should not be bled, but permission obtained to contact the GP. Simple laser therapy unaccompanied by additional therapy should not be a cause for deferral.

Diabetes Mellitus

Both new and established donors who present with diabetes may be accepted only if the disease is controlled by diet alone and they appear otherwise fit. Requirement for any form of replacement therapy should debar (further) donation.

Epilepsy

Some patients with epilepsy react to minor stress by having fits and it is important that additional risks should be avoided. Anyone on regular medication for epilepsy should not be accepted as a donor. A known epileptic who has not required regular anticonvulsant therapy nor been subject to daytime fits for at least three years may with discretion be considered as a possible donor, but it should be remembered that a fit may be difficult to deal with during a busy session and can be upsetting to other donors. A donor who gives a history of petit mal may be accepted providing no treatment has been needed for 3 years or more.

Gastrectomy

Patients who have had a total or partial gastrectomy frequently have reduced iron absorption thereafter and should therefore be excluded as donors. This does not include vagotomy and drainage.

Gout

Accept unless the donor is undergoing an acute attack, or is on maintenance R_x.

Haemophilia (Disease).

A donor who declares a carrier state of haemophilia or allied disorder e.g. Christmas disease, Von Willebrand's disease may be accepted if the person has not received coagulation factor concentrates and after appropriate enquiries have been made of the local Haemophilia Centre Director and/or the family doctor. Donations from such a person should not be used for the preparation of coagulation products, hence donations are taken into a single pack.

Haemophiliacs who have ever received blood products; their sexual contacts; and family members involved in administration of coagulation factor concentrates should <u>not</u> be accepted.

Heart Operations

Where surgery has been carried out in early life for correction of congenital malformations, donation may be considered. It should only be accepted after appropriate consultation between the Transfusion Centre and the donor's medical adviser(s).

Hepatitis - Hepatitis B surface antigen and antibody

It is the donor with Hepatitis B surface antigen in the blood who is a potential risk and is not bled at mobile clinics. Donors with antibody constitute no risk, in fact their plasma is used to prevent or treat hepatitis and these donors are bled at mobile clinics.

The record cards of antigen positive donors are stamped with one or more of the following: (depending upon the terminology at the time of testing)

Au (1) positive	Do not bleed or sample at mobile clinics
Au positive	
Australia antigen positive	
HAA positive	
HBsAg positive	

The corresponding abbreviations for antibody positive donors are:

Au (1) antibody positive	accept at mobile clinics
Au antibody	
Australia antibody	
HBsAg	
anti HBs	

The plasma of antibody positive donors is used to make specific immunoglobulin for the prevention and treatment of Hepatitis B. Such donors provide valuable plasma and constitute no risk. The most usual abbreviation to see these days is either HBsAg or anti-HBs for antigen and antibody positive individuals respectively.

Hepatitis - Donors with a history of jaundice/hepatitis

Individuals who give a history of jaundice or hepatitis or in whose blood anti-HBs is present may be accepted as donors providing that they have not suffered from jaundice or hepatitis in the previous twelve months, have not been in close contact with hepatitis or received a transfusion of blood or blood products in the previous six months, and providing their blood gives a negative reaction for the presence of HBsAg when tested by an accepted sensitive method (eg RIA). An approved test for hepatitis B surface antigen should be performed each time a donor is bled; donors whose blood is shown to carry HBsAg shall be excluded from the ordinary donor panel. They may only be considered for reinstatement under special circumstances and if they have been subsequently demonstrated by appropriately sensitive tests to be persistently negative for known viral markers (HBc, HBe) for at least twelve months and have an adequate level (>1 i.u/ml) of anti-HBs antibody.

Any individual whose certificate book carries a stamp "HBsAg positive" should not be bled or sampled at a mobile clinic. Such donors are asked to attend one of the two static clinics for follow up and are never invited to mobile clinics. An individual who does attend in these circumstances should be told that he/she will be contacted by the centre, and details should be sent to Dr. Barbara.

Any established donor who gives a history of jaundice or hepatitis since his/her last donation should not be bled within 12 months of the episode. Providing 12 months have elapsed since illness, samples may be taken (but not a full donation), and a decision will then be made on the acceptability of that donor. Any first time donor who gives a definite history of hepatitis B should be treated in exactly the same manner. A first time donor who gives a history of jaundice/hepatitis (but not confirmed hepatitis B) may be accepted for routine donation providing 12 months have elapsed.

Hypertension

Hypertension need not be a reason for refusal of a donor if diuretics alone are given as therapy; in these cases it is advisable to check the blood pressure before donation. Donors on Beta blockers or vasodilators should not be bled because of the possible complications which may follow the sudden lowering of arterial tension caused by the withdrawal of blood. In a few circumstances regular donors, with the permission of their GP, omit Beta blockers for 24-48 hours before donation. In pre-existing cases, this practice may be continued and the donor accepted providing the blood pressure is satisfactory on the day of donation. Newly presenting donors on Beta blockers should not be accepted, because of the risk of adverse effects (fainting) in the donor due to the inability to increase heart rate in response to blood loss. If a donor needs to be bled for the relief of symptoms, whether from hypertension, polycythaemia or other condition, this should be done in hospital where complications, should they occur, can be dealt with more satisfactorily than at a donor session.

Immunoglobulins

Donors who have received immunoglobulins for passive protection after presumed exposure should be deferred for the following intervals (which may be longer than the incubation period of the disease in question, because administration of immunoglobulin can "prolong" the incubation period).
Anti-tetanus immunoglobulin - 4 weeks.
Normal human immunoglobulin - 6 weeks (anti-hepatitis A).
Anti-hepatitis B - 9 months.
If normal human Ig has been given as prophylaxis before possible exposure to hepatitis A (i.e. before foreign travel), 1 week is sufficient

Infectious Diseases

Donors who have been in contact with infectious diseases should be deferred for the length of the incubation period, or for 4 weeks if the incubation period is unknown. Those who have had an infectious disease should be deferred for 4 weeks after recovery. If presenting within 3 months of the illness, donations should be labelled for immune plasma.

Inoculations

a) Live vaccines	Deferral time for donations for transfusion purposes
BCG, Measles, Mumps, Polio (oral), Rabies, Yellow fever (smallpox)	3 weeks - providing donor feels well

Rubella	3 months
b) Killed vaccines/toxoids	
Anthrax, Cholera, Common Cold, Diptheria, Influenza, Polio (Salk), Tetanus, Typhoid (monovalent and TAB)	1 week - providing donor feels well
Hepatitis B	1 week - where there has been no known exposure to hepatitis B. If given with immunoglobulin after exposure - 9 months

Infectious Mononucleosis (Glandular Fever)

Most patients recover completely within a few weeks. However, following temporary improvement a few experience relapses even up to a year or more later. In view of this and the known viral cause(s) of this illness, donations should not be accepted until TWO YEARS after the diagnosis has been made.

Meningitis

Donors who give a history of meningitis should be deferred for one year.

Pneumothorax

Benign spontaneous pneumothroax (in the absence of underlying chest disease) does not disqualify from donation. A history of recurrent pneumothoraces or associated chest disease should disqualify.

Raynauds Syndrome

Individuals who give a history of simple Raynaud's syndrome which is unconnected with other symptoms (suggestive of connective tissue disease) and which does not require treatment may be accepted. Those donors who are receiving vasodilator therapy should not be bled because of the increased risk of fainting. Where there are additional symptoms or the aetiology is unclear permission to contact the GP/Consultant should be obtained.

Red cell abnormalities

Most individuals with clinically significant red cell abnormalities will not volunteer as donors. Provided the would be donor with a covert red cell abnormality appears well and passes the Hb test there is little risk to donor or recipients e.g. thalassaemia trait.
In the case of G6PD deficiency, donations should be taken into single packs and labelled with a luggage label.

Respiratory Tract Infections

Donors who admit to recent mild upper respiratory tract infections should be critically assessed. If there is malaise, sore throat, or productive cough the donor should be deferred. A donor who feels "under par" or "less than 100%" should be deferred. Those who feel well, and whose symptoms are mild or waning may be accepted.

Sickle cell trait/disease

The majority of individuals with Sickle cell disease will fail the haemoglobin screening test. Donors who may have sickle cell trait can be accepted (providing the Hb test is passed). The bleed sheet must always be stamped "For Sickle test" at every donation. Donors known to have sickle cell trait may be accepted for routine donation but not for heart-lung or quad packs - due to the deleterious effect of sickling in the recipient. A luggage label should be attached to the pack "Hb AS" if this information is on the 101 card.

Thyroid Disease

Donors who are obviously suffering from thyriod disease (myxoedema or thyrotoxicosis) should not be bled. Donors on stable, regular doses of throxine for 1 year or longer may be accepted. Those who have recovered from thyroid operations or radio-active iodine treatment (provided at least six months have elapsed since any treatment was given), may be accepted after consultation with the donor's medical adviser.

Toxoplasmosis

It is not practicable to test for the presence pf toxoplasma as a routine and it is not known whether the blood of persons recently ill from toxoplasmosis is infective. It would seem wise not to accept blood from volunteers with a known history or toxoplasmosis until a year has elapsed from the specific antibody (eg dye) test becoming negative. A donor who presents giving this history should have an extra 10ml clotted sample taken for testing and should be deferred until results are obtained.

Tuberculosis

Any donor under treatment or regular surveillance for tuberculosis should not be accepted. For other donors with a history of tuberculosis it is advisable to seek information, with the donor's consent, from their family doctor after which a decision can be made. Where the history is of a short illness many years previously and no further checking was advised, the donor may be accepted. When the donor has been in casual contact (eg at work, social events) with a case of tuberculosis, a donation can be accepted. Close family contacts of "open" spaces should be deferred until clearance is given by the hospital consultant

Venereal Disease

It is not customary to question donors about venereal disease, but information may be volunteered. A person who is known to have, or has had, syphilis is unacceptable as a donor (see European Pharmacopoeia Vol 3, 1975). Donors who give a history of gonorrhoea may be accepted 1 month after the end of the course of treatment.

Donors who have had an attack of Non Specific Urethritis (NSU) or Genital Herpes may be accepted when fully recovered from the symptoms.

2. LIST OF CONDITIONS NECESSITATING PERMANENT DEFERRAL

Cardiovascular Diseases

Individuals with circulatory disorders are especially subject to cardiovascular and cerebrovascular disturbances resulting from rapid haemodynamic alterations for which they are unable to provide adequate rapid compensation. Thus, all such donors are excluded.

Including:
angina, ischaemic heart disease, cardiac surgery, hypertension (except on diuretic therapy alone)
- thrombophlebitis secondary to venepuncture,
- repeated thrombophlebitis,
- thrombosis (coronary, cerebral, or repeated deep venous)
- pulmonary embolus

Respiratory Diseases

Individuals who have significant chest disease should not be accepted.

Including:
- Emphysema, severe chronic bronchitis, severe or frequent asthma,
- Other disorders such as pneumonia, pleurisy, and pleural effusion and recurrent pneumothoraces necessitate deferral so that further details may be obtained for the General Practitioner/Hospital Consultant

Central Nervous System Diseases

In general, these conditions are contra indications to donation, as the individual may well be unduly susceptible to sudden haemodynamic changes.

Including:
- stroke (of any form),
- transient ischaemic attacks,
- multiple sclerosis,
- epilepsy - requiring continual therapy
- Creutzfeld-Jakob disease (because of viral origins)

Renal Diseases

All chronic renal diseases

Including chronic glomerulonephritis, chronic pyelonephritis, and nephrotic syndrome.

Gastrointestinal Diseases

Partial or total gastrectomy (because of the frequent association with impaired iron absorption and eventual iron deficiency)
Cirrhosis of the liver
Crohns disease
Ulcerative colitis

Metabolic Diseases

Diabetes requiring insulin or oral hypoglycaemic therapy
Gout requiring continual therapy

Haematological Disease

Polycythaemia - Although polycythaemia (whether primary or secondary) may well be helped by venesection there are strong reasons for not accepting these individuals as donors. They require frequent haematological monitoring, which we are unable to provide, and are liable to complications of the condition (eg cerebro-vascular incidents) which make venesection hazardous. Therefore donors with polycythaemia should not be bled, but details should be taken, including the name and address of the G.P., who will be contacted.

Idiopathic Thrombocytopenic Purpura

Infectious Diseases

Brucellosis
Trypanosomiasis
Kala-azar
Granuloma Inguinale
Lymphogranuloma venereum.

Miscellaneous

Auto-immune diseases
Sarcoidosis (because relapses occasionally occur, and may be blamed upon blood donation).
Rheumatoid Arthritis
Cancer (in any form although exceptions are made for carcinoma in situ of cervix and rodent ulcer)
Delayed faint (because of potential of serious injury)

In cases of doubt, the donor should be asked for permission to contact his/her General Practitioner.

3. INFECTIOUS DISEASES AND PLASMA FOR IMMUNOGLOBULINS

The plasma of donors who have recently suffered from certain infectious diseases or who have been immunised against them can be used for the production of specific immunoglobulins and should be collected accordingly with a label attached to the pack giving the details of the illness or immunization. The red cells may be used for transfusion provided the interval since immunisation or illness accords with the recommendations given previously (p.13)

(i) Convalescence from infectious disease

Plasma from donors who have recovered within the previous three months from any of the following infectious diseases:-

Chickenpox, Herpes Zoster, Herpes Simplex, Measles, Mumps.

(ii) After Active Immunisation

(a) Tetanus - plasma taken from individuals between 3 weeks and six months of completing a primary immunisation course or of a reinforcing dose of vaccine against tetanus or plasma which has been shown by a screening method to contain an adequate titre of tetanus antibody.

(b) Rabies - plasma from individuals 4-12 weeks after the last (third) injection of a primary immunisation course or 3-12 weeks after reinforcing dose of vaccine against rabies. Categories of individuals eligible for immunisation against rabies are given in health circular HC(77)29, para 1.

(c) Hepatitis B - plasma taken from individuals between one month and six months of completing a primary immunisation course or of a reinforcing dose of vaccine against hepatitis B or plasma which has been shown by a screening method to have at least 15 i.u. per ml (10 i.u. per ml in Scotland) of antibody to HBs Ag.

4. TROPICAL DISEASES

Donors should be asked if they have visited places abroad (other than in Western Europe, Australia, New Zealand or North America) or have lived in such places within the past five years. Attention should be paid to the growing tendency to visit tropical areas en route to the Antipodes. The most important diseases to bear in mind when considering the fitness of such donors are hepatitis B and malaria because of their world-wide distribution; certain other diseases must also be considered before accepting, deferring, or rejecting such donors (including AIDS prevalent in Central Africa).

The following notes give general guidance regarding the fitness as donors of people who have had certain tropical diseases or who have recently returned to the UK from the tropics.

(i) HEPATITIS B. Although hepatitis B is not strictly a tropical disease, its causative virus is far more prevalent in tropical and subtropical areas than in the UK. Donors who have been in such areas for six months or more must

therefore be regarded as being at increased risk of having and perhaps transmitting this disease. They may be accepted as donors, but their blood or blood products should only be issued for transfusion if shown to be negative for hepatitis B surface antigen by a test which detects at least 2 British Standard Units per ml. (eg radio-immunoassay). Therefore, donors who have spent 6 months or more in an HHR area since their last donation should be bled on the B sheet and labelled HHR TTO. (This Time Only)

HHR AREAS

	Mediteranean
Central America	Spain
South America	Sicily
West Indies	Greece
Africa	Cyprus
India	Egypt
Far East	Yugoslavia
Middle East	Italy
	Malta

(ii) MALARIA (T.A.)

MALARIA. The decision whether or not to accept donations from people who have visited or lived in endemic malarious areas (see list and map) will be made according to the following criteria-

A. DONORS WHO HAVE HAD AN ATTACK OF MALARIA
DONORS BORN IN AN ENDEMIC MALARIOUS AREA (SEE LIST)

Time elapsed since attack of Malaria or arrival in UK	Action to be taken
Up to 3 months	Defer
3 months to 3 years	Accept for plasma donation only) provided the donor is asymptomatic and has taken no antimalarial therapy
3 years onwards	Accept for normal routine donation) provided the donor is asymptomatic and has taken no antimalarial therapy

B. DONORS WHO HAVE VISITED AN ENDEMIC AREA
(including those who have merely passed through)

Time elapsed since visit	Action to be taken	
Up to 3 months.....	Defer	
3 months to 6 months.....	Accept for plasma donation only	) provided) the donor is) asymtomatic) and took
6 months onwards.....	Accept for normal routine donation	) antimalarials) for one month) after return

C. DONORS WHO HAVE VISITED AN ENDEMIC AREA AND HAVE TAKEN NO MALARIA PROPHYLAXIS

Treat as section A above

There follows a list "for reference purposes" of countries with risk of malaria provided as a guide when a donor states that he/she has been in a country which might have a risk.

This list has been updated in 1986 and you must remember that the malaria risk in different countries varies with time. The list is extremely detailed and it should be used as a reference for particular cases.

Whenever a country is listed as a malaria risk "only in rural areas" then it may be presumed that urban areas and main airports are not included. For example, Malaysia is high risk but not urban areas - so Kuala Lumpur and its airport are not included. Similarly Nairobi, Bangkok, Singapore, and their airports are not high risk. However, Dacca airport is apparently considered a risk! (see Bangladesh).

COUNTRIES WITH A RISK OF MALARIA

AFRICA (* inhabitants excluded from 18 month rule for HIV [AIDS])

*Algeria : only in Dept. of Wilaya and Ouagla.
Angola : only in northern part of the country.
Benin
Botswana
Burundi
Cameroon, United Republic of
Cape Verde : only in rural areas (no risk in urban areas)
Central African Republic
Chad
Comoros
Congo
Djibouti
*Egypt : only in rural areas (no risk in urban areas)
Equatorial Guinea
Ethiopia
Gabob
Gambia
Ghana

Guinea
Guinea-Bissau
Ivory Coast
Kenya : except city of Nairobi. Chloroquine resistant P. falciparum
Liberia
*Libyan Arab Jamahiriya : only in rural areas:
Madagascar : chloroquine resistant P. falciparum.
Malawi
Mali
Mauritania
Mauritius
*Morocco : only in rural areas.
Mozambique
Namibia
Niger
Nigeria
Rwanda
Sao Tome and Principe
Senegal
Sierra Leone
Somalia
South Africa : only areas bordering Botswana, Mozambique and Zimbabwe.
Sudan
Swaziland : northern border areas.
Tanzania, United Republic of
Togo
*Tunisia - only rural areas
Uganda
Upper Volta
Zaire
Zambia
Zimbabwe

AMERICAS

Argentina : area near Bolivian border only.
Belize : except Belize district.
Bolivia : except provinces of La Paz, Oruro, Potosi.
Brazil : no risk in urban areas except Amazon river region.
Colombia : no risk in urban areas. Chloroquine-resistant P. falciparum.
Costa Rica : no risk in urban areas.
Dominican Republic : areas bordering Haiti; no risk in urban areas.
Equador : no risk in Galapagos Islands and vacinity of Quito.
El Salvador : no risk in urban areas.
French Guinea: except Cayenne City. Chloroquine-resistant P.falciparum.
Guatemala : except Guatemala City and Central Highlands.
Guyana : no risk in urban areas. Chloroquine-resistant P. falciparum.
Haiti
Honduras : no risk in urban areas.
Mexico : no risk in urban areas except for Alamos and Sonora State. No risk in tourist resorts along Pacific and Gulf coasts.
Nicaragua : no risk in urban areas except outskirts of some towns.
Panama : no risk in urban areas. Chloroquine-resistant P. falciparum.
Paraguay : no risk in urban areas.
Peru : no risk in urban areas.
Surinam : no risk in urban areas. Chloroquine-resistant P. falciparum.
Venezuela: no risk in urban areas. Chloroquine-resistant P.falciparum.

OCEANIA

Papua New Guinea : Chloroquine-resistant P. falciparum.
Solomon Islands : Chloroquine-resistant P. falciparum.
Vanuata (formerly New Hebrides).

ASIA

Afghanistan
Bahrain
Bangladesh : except Dacca City but including Dacca airport.
Chloroquine-resistant P. falciparum.
Bhutan : except Chirang and Sanch.
Burma : Chloroquine-resistant P. falciparum.
China, People's Republic of : no risk in usual tourist routes.
Democratic Kampuchea (formerly Cambodia) : Chloroquine-resistant P. falciparum.
India : Chloroquine-resistant P. falciparum.
Indonesia : except Djakarta and Surabaya.
Iran : no risk in urban areas.
Iraq : northern region.
Jordan : no risk in urban areas
Lao People's Democratic Republic : except Vientiane.
Malaysia: no risk in urban areas. Chloroquine-resistant P.falciparum.
Maldives : except Male Island.
Nepal : no risk in urban areas.
Oman : ~~no risk in urban areas~~. Chloroquine-resistant P. falciparum.
Pakistan :
Philippines : no risk in urban areas. Chloroquine-resistant P.falciparum.
Saudi Arabia : except Alhasa, Arar, Jauf, Quraiya and urban Jeddah, Medina, Mecca.
Singapore : no risk in urban areas.
Sri Lanka (formerly Ceylon) : except Colombo.
Syrian Arab Republic : no risk in urban areas.
Thailand : no risk in urban areas. Chloroquine-resistant P.falciparum.
Turkey : only in Cukorova/Amikova areas and southeast Anatolia.
United Arab Emirates
USSR : only in areas near Iran and Afghanistan.
Viet Nam : except northern delta region. Chloroquine-resistant P. falciparum.
Yemen : except Hajja and Sada Province.
Yemen, Democratic : except Aden and airport perimeter.

MIDDLE EAST - MALARIA RISK

Country	Malaria Free	Malaria Risk
Bahrain	Whole country	-
Iran	All major urban areas	Remote rural areas
Iraq	All major urban areas/ areas likely to be visited by Europeans	Remote Northern region (rural)
Israel	Whole country	-
Jordan	Whole country	-
Kuwait	Whole country	-
Lebanon	Whole country	-
Oman	None	Whole country
Quatar	Whole country	-
Saudi Arabia	Urban areas of Jeddah, Mecca, Medin, Taif	Rural areas of Eastern, Northern and Central Provinces
Syrian Arab Rep	Urban areas of Damascus Deir-es-Zor, Homs, Sweida, Tatrus	All rural areas
United Arab Emirates (U.A.E.)	All urban areas and areas likely to be visited by Europeans, i.e. Abu Dhabi, Dubai, Sharjah, Ajman and Umm al Qaiwain	Foothills and valleys of the remote Northern Emirates
Yemen and Dem. Yemen	Hajja Aden & Airport	All other areas

MALARIA FREE COUNTRIES (W.H.O. 1984)

Europe
Albania
Andoria
Austria
Belgium
Bulgaria
Czechoslavakia
Denmark
Faroe I.
Finland
France
German Democratic Republic (W)
Germany; Federal Republic (E)
Gibraltar
Greece
Hungary
Iceland
Ireland
Italy
Liechtenstein
Luxembourg
Malta
Monaco
Netherlands
Norway
Poland
Portugal; Maderia, the Azores
Romania
San Marino
Spain
Sweden
United Kingdom
Yugoslavia

Africa
Chagos Arch.
French Southern & Antarctic Terr.
Lesotho
Reunion
Saint Helena
Seychelles
Tunisia
Western Sahara

North America & West Indies
Anguilla
Antigua
Bahamas
Barbados
Bermuda
British Virgin Islands
Canada
Cayman Islands
Cuba
Dominica
Greenland
Grenada
Guadeloupe

MALARIA FREEE COUNTRIES (cont)

Jamaica
Martinique
Monserrat
Puerto Rica
Saint Lucia
Saint Vincent & The Grenadines
Trinidad & Tobago
Turks & Caicos
United States of America
Virgin Islands

South America
British Antarctic Territory
Chile
Falkland Islands
Uruguay

Asia
Bahrain
Brunei
Cyprus
Hong Kong
Israel
Japan
Jordan
Korea
Kuwait
Lebanon
Macau
Mongolia
Qatar
Singapore

Oceanic
Australia
Fiji
French Polynesia
Guam
New Caledonia
New Zealand
Pitcairn Islands
Samoa
Tonga

U.S.S.R.

(iii) TRYPANOSOMIASIS

Because TRYPANOSOMIASIS may lead to an acute or chronic incurable and even fatal illness, blood of persons who have visited or lived in rural S. America or Central America including Southern Mexico should ONLY be used for preparing plasma fractions (<u>not</u> fresh/fresh frozen plasma or cryoprecipitate). Donations from such people may be used for normal purposes provided they have been shown by suitable tests to be free of antibodies to Trypanosoma Cruzii.

(iv) ARTHROPOD-BORNE ENCEPHALITIDES)
)
DENGUE FEVER)
RIFT VALLEY FEVER)
SANDFLY FEVER) Donations acceptable
SCHISTOSOMIASIS) provided donor completely
WEST NILE VIRUS FEVER) recovered
YELLOW FEVER)

(v) RELAPSING FEVER

People may be accepted as donors two years after recovery from this disease.

(vi) AMOEBIC DYSENTRY

Donations acceptable provided adequate treatment has been given and the donor has completely recovered.

(vii) PYREXIA OF UNKNOWN ORIGIN IN PERSONS WHO HAVE VISITED THE TROPICS

The possibility has to be kept in mind that pyrexia might result from infection with the causative agent of <u>LASSA FEVER</u> or other dangerous viruses. In view of this, blood or blood products from such persons should not be used until three months have elapsed following resolution of the pyrexia, or six months after return to the UK, whichever is the longer.

(viii) FILARIASIS)
KALA AZAR)
LEPTOSPIROSIS) Donations should <u>NOT</u> be accepted
Q FEVER)
YAWS)

(ix) GENERAL

People returning from tropical areas should not donate blood until 3 months after arriving in the UK. Many of the diseases above for example, may take the form of a short-lived viraemia, without specific clinical symptoms. People harbouring any of these viruses will automatically be excluded during the potentially dangerous period by adopting this three month period of "quarantine."

EXAMINATION OF THE DONOR

1. Haemoglobin estimation The haemoglobin should be determined each time the donor presents. Female donors with less than 12.5 g/dl, or male donors with less than 13.5 g/dl should not be bled. The type of test used is left to the discretion of the Regional Transfusion Directors, but the Phillips - Van Slyke copper sulphate method (Reference: J. Biol. Chem. (1950) 183-305 is still widely used as a screen test, sometimes supplemented by a photometric haemoglobin estimation. Both tests are performed on a sample of blood commonly obtained from a finger.

Donors whose haemoglobin appears to be below the appropriate level should have the level checked using a portable haemoglobinometer. If the level is <10 g/dl (female) or <11 g/dl (male), a sample of venous blood should be taken into sequestrene for full laboratory assessment. These donors should be advised to consult their own doctors who will receive a report of the results obtained. A leaflet "Low Hb - What does it mean" should be given to all donors deferred because of a suboptimal haemoglobin level. All these donors, (except women of childbearing age with Hb between 12-12.5 g/dl) should be advised to see their GP and given a letter for the GP stating the Hb level as measured. When the haemoglobinometer is not available venous samples should be taken from all donors who fail the Hb screening test.

2. The medical history should be coupled with a careful assessment of the donor's appearance. The experienced doctor can detect many potentially unsuitable donors at a glance. Those of poor physique, the debilitated, the undernourished, the mentally unstable and those bearing obvious stigmata of disease should not be bled. Alcohol intoxication should be grounds for deferral. There is an increased risk of fainting (due to vasodilation) although the alcohol level in the blood is unlikely to cause problems in an adult recipient. If a diplomatic refusal to such a donor cannot be made, at the very least he/she should be warned not to drive for a few hours after donation in case of a delayed faint.

Middle-aged and older donors have an increased risk of acquired cardiovascular disorders. Whilst most donors may be accepted on the basis of medical history, general appearance and haemoglobin estimation, it is advisable to examine the pulse and check the blood pressure where there are any doubts, particularly of new donors (see also under Hypertension).

NOTE: A complete medical examination including X-Ray examination, electrocardiogram and extensive haematological tests is obviously impractical for normal donors, but the above procedure, used skilfully, will lead to the rejection or deferment of most donors who are unfit to be bled and it should be carried out meticulously. When in doubt it is better to reject or defer, and the Medical Officer should then see that an appropriate entry is made on the donor's record.

When a donor is deferred because of doubt as to the fitness to donate, permission to contact the General Practitioner should be obtained on the standard form available at all sessions. In general, only healthy people with a good medical history should be accepted as donors.

Donors who use wheelchairs should be critically assessed; a wheelchair per se is not reason for rejection but severe neurological disease is.

DONORS ON TREATMENT WITH DRUGS

In general, donors receiving courses of prescribed medication should be deferred at least until one week after treatment is completed. This is to ensure that both the blood collected is as near normal as possible, and to minimise risks for donors themselves. In some circumstances it may be considered wiser to defer longer, viz. three weeks after the more powerful tranquilisers and for six months after steroids. Donors having continuous hormone replacement therapy should be deferred and the R.T.C. will discuss with the donor's General Practitioner before a decision is taken, please ensure that a consent form is completed. This does not apply to HRT (hormone replacement therapy) for menopausal symptoms or thyroxine which are both acceptable.

Sporadic self-medication with some drugs (eg antacids, vitamins etc) need not prevent a donation being accepted. If the donor has taken drugs affecting platelet function (see aspirin, anti-inflammatory drugs) within the last 10 days, the donation should be taken into a double pack so that no platelets are prepared from the donation. While the Medical Officer may use discretion in accepting or deferring a particular donor who has been treated, it is recommended that appropriate notes should be made and that in any doubtful situation it is wiser to defer.

Illicit drug taking if admitted or suspected should defer.

Drugs and Medications:-

Contraceptive pill)
Menopausal hormone replacement)
Tetracycline or erythromycin) Accept
(for acne))
Thyroxine (stable dose))
Vitamins (unless prescribed by GP e.g. vit B_{12}))

Roaccutane (13 cis retinoic acid) - defer for 1 month)
Tigason (etretinate) - defer for 1 year)
Both these drugs, used for treatment of severe acne, are teratogenic.

Antibiotics defer (depending somewhat on the underlying condition). In general, allow 1 week after cessation of treatment to allow for full recovery from underlying infection. However, in some circumstances a donor may be accepted if 72 hours have elapsed since the antibiotic was stopped, but in these cases it is wise to bleed into a single pack so that no components are prepared.

Anticonvulsants - defer

Antidepressants - defer

Antifungals - defer until course completed. Wait 24 hours from last dose

Antihistamines - accept, providing symptom free, and on small dose (ie not usually severely affected).

Antihypertensives

Diurectics alone (usually thiazides) - accept. Spironolactone is not a usual first-line therapy and is often given when there are lvier problems, therefore defer until further information is available from GP/hospital.
Beta blockers - permanently disqualify, even if the BP is normal on treatment, as the donor will not be able to compensate for the sudden haemodynamic changes by increasing the heart rate.

Aspirin and anti inflammatory drugs - accept,

providing the underlying condition does not warrent deferral. Since all these drugs affect platelet function, any donation taken within 10 days of stopping the drug should be taken into a double pack, instead of a triple or quad pack, so that no platelets are produced from that donation. Of course, if routine donations are being taken into single packs (eg Saturday, or Sunday morning), then so should these donations.
Paedipack donations may be taken, as no platelets are produced from these packs.

Coagulation factor concentrates

Treatment with any coagulation factor concentrates - do not accept.

Corticosteroids - defer, usually because of underlying condition. Any known autoimmune disease disqualifies an individual from donation.

Endocrine drugs

Oestogens - accept if prescribed for hormonal/menstrual disorders.
Contraceptive pill - accept.
Corticosteroids - usually defer, depending on underlying condition. Any known autoimmune disease disqualifies an individual from donation.
Growth hormone (human) - disqualify even if no recent therapy because of very remote risk of Creutzfeldt Jakob disease.
Insulin - disqualify.
Menopausal hormone replacement therapy - accept.
Progestogens - accept.
Thyroxine - accept if on stable dose.
Others e.g. anabolic steroids, bromocriptine, danazol calcitonin depend upon the underlying condition. Usually, further information will need to be obtained from the medical adviser.
Women receiving hormonal treatment for infertility should not donate blood.

Major tranquillisers - defer, because of

(i) possible ill-effects in recipient
(ii) underlying condition.

Sedatives and minor tranquillisers - defer for 24-48 hours (ideally) after last dose of day. Low doses used for night sedation should not be a cause for deferral.

Vasodilators - disqualify, because donors will be susceptible to fainting; and because the underlying condition will probably also disqualify.

SECTION III - 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/she is at a blood donor session.

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

1. The use of carefully prepared sterile equipment.

2. Sterilisation of the skin prior to venepuncture, using an approved well-tried method. Palpation of the skin over the proposed venepuncture site must be avoided once the skin has been cleansed, in order to avoid any infection of the venepuncture site.

3. Immaculate technique of venepuncture. An intradermal injection of local anaesthetic may be given prior to insertion of the phlebotomy needle at the request of the donor. If the medical Officer decides to use local anaesthetic the donor must always be informed. A suitable antecubital vein should be selected preferably avoiding whenever possible any vessels that are overlying or adjacent to an artery. Normally not more than 450 ml blood plus small laboratory samples should be withdrawn. No matter how experienced the doctor (or in some situations the R.G.N. under an M.O.'s supervision) he or she will occasionally "miss" a vein. No further attempts should be made except at the donor's specific request. Any second attempt should only be made on the other arm if at all, and even then only if there is good prospect of a successful venepuncture. A new pack should be used for a repeat venepuncture. If a donor complains of severe pain in the arm or at the venepuncture site, the donation should be terminated immediately. On no account should local anaesthetic be given after a venepuncture.

4. The enforcement of a definite routine upon the donor during the resting period after withdrawal of blood. The resting period is of special significance in regard to the prevention of the "delayed faint" (see 5 below). New donors should rest for 15 minutes, others for 10 minutes.

   (a) If rest is refused, this should be noted on the donor's record.

   (b) Before the donor leaves, the site of venepuncture should be inspected. On occasion it is possible to forestall complaints from donors by warning them, for example, of likely bruising, and if necessary, giving an explanatory leaflet. A dressing should be placed over the site of venepuncture

5. The immediate and considerate treatment of those who faint. A small proportion of donors, variously estimated at 2 to 5%, faint. This is usually only a transient episode, but in a few instances may be prolonged and troublesome. The "delayed" faint is potentially more dangerous since the donor may be in the street or back at work; it may then prove very important to be able to demonstrate that the routine outlined in Section III, para. 4 (a), (b), was followed. A history of

a definite delayed faint (but not merely dizziness) is reason for permanent deferral of an individual! Because fainting is sometimes psychological in origin, it cannot always be anticipated. It is more likely to occur in otherwise normal healthy donors who have had little or no food for several hours. Also, donors under about 47 kg (7 1/2 st) in weight may not withstand giving a full donation without fainting, and therefore should be bled into Paedipacks (250ml donation volume), unless there is a past history of uneventful "full" donations. A history of repeated fainting in a donor weighing more than 7 1/2 stone should not be grounds for use of a Paedipack. Such donors should be deferred.

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 depends very much upon the standard of medical care given to the donor.

SECTION IV - 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. Complaints of a medical nature must 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, eg haematoma, fainting, damage to or loss of, a donor's property, should be noted at the time upon the donor's record card, and if necessary the clinic report.

   The recording of apparently trivial incidents has, in practice, proved of value as long as two years later.

2. Serious incidents or accidents during blood collecting sessions should be noted on the clinic report sheet. These incidents will be dealt with on the next working day. All such incidents, and complaints made direct to the Regional Transfusion Centre, should be fully recorded in a book kept for the purpose, together with full notes of all investigations made.

3. Any incident which is considered to be of a serious nature, and which may require immediate action, should be reported to a Consultant or other doctor at the Regional Transfusion Centre by telephone or by a note sent back from the session with a driver. (eg where the clinic report will not be seen until after the weekend).

An analysis of complaints and accidents should be made annually at each R.T.C. The following headings have proved useful:

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.

NORTH LONDON BLOOD TRANSFUSION CENTRE, Deansbrook Road, Edgware, Middlesex HA8 9BD	DONOR CLINIC TECHNICAL GUIDE		
Revision No.	Issue date	Page 1 of 3	No. 30.1
Subject: PERFORMANCE OF VENEPUNCTURE FOR BLOOD DONATION			

PURPOSE:

To lay down the procedures to be followed in carrying out venepuncture for blood donation.

SCOPE:

These instructions apply to all RTC donor clinics.

GENERAL:

Venepuncture may be regarded as successful if

1 the subject suffers little or no discomfort

2 there are no local after effects eg. bruising or infection

INSTRUCTION:

1 Donor Position

The donor should be lying down with a low pillow under the head.

2 Choice of arm

It is usual to select the left arm in a right-handed donor and vice versa, but the deciding factor should be the suitability of the veins.

Position of arm

3 The arm should be by the side of the donor in the anatomical position with a firm pad or pillow under the elbow. The donor should be asked to confirm that the arm is in a comfortable position.

4 Venous obstruction

In static clinics where sphygmomanometers are in use, the cuff should be applied, care being taken to fold the donor's shirt/dress sleeve so as to avoid any ridges. Apply it as high as possible up the arm and inflate to 60mm - 70mm Hg before selecting a suitable vein using three or four firm stroking actions along the arm from wrist if necessary.

On mobile clinics, a simple tourniquet is used to perform this function.

5 Selection of vein

Select a non-mobile, medium-sized, easily palpable vein which need not necessarily be clearly visible, and always palpate to be sure that an aberrant artery has not been mistaken for a vein.

6 Skin preparation

Prepare an area about 3 inches in diameter using the recommended swabs and working in a spiral direction from the venepuncture site outwards. There should then be no more fingering or palpation.

7 Local anaesthetic

May be given at the request of the donor, or at the discretion of the Medical Officer, but in the latter case, the donor should always be warned. A new needle and syringe should be used for each injection of local anaesthetic. An entry should be made on the record card for future reference.

8 Venepuncture

The bleed line should be clamped to ensure that no air enters the tubing or pack once the needle cover is removed. Once air is present in the tubing or pack the donation must be considered contaminated, and terminated. All such packs should be labelled "Air in Pack". Remove the needle cover, check the point for 'hooking' and insert the needle through the skin proximally along the path of the local anaesthetic (if given). Keep the bevel facing away from the skin and the shaft at an angle of about 15^{o} to the arm and make the skin taut by pressure with the thumb. After the needle has entered the vein advance it about 1/2" further, remove the clamp and tape the bleed line to the arm to keep the needle in position and ask the donor to give a firm long squeeze to the hand-hold about once every 30 seconds. Place a cotton wool swab over the site ready for pressure application after the needle is withdrawn.

9 Terminating the donation

When the required volume of blood has been collected clamp proximally and seal the bleed line. Sever between clamp and seal and collect the necessary samples by releasing the clamp while the needle is still in the vein.

Remove the needle, applying increasing pressure to the swab as you do so, and then ask the donor to maintain this pressure with the free hand.

Check the serial numbers on sample tubes and pack against the 101 card. Then examine the venepuncture site and when dry, apply a dressing and instruct the donor about its removal.

10 Haematoma

Haematoma may be caused by transfixion of the vein, dislodgement of the needle or by damage to another vein, and blood escaping into the tissues will slow or stop the donation. Terminate the donation, explain the circumstances to the donor and warn that the arm will become bruised. An explanatory leaflet may also be given.

11 Arterial Puncture

This is a rare but very important complication of blood donation. It may be recognised by an unusually fast donation, and by the colour of the blood. Once recognised the following measures should be taken:-

i) Discontinue the donation. A very rapid full donation from an arterial puncture is likely to lead to fainting due to acute lowering of the blood pressure. Therefore the donation should not be continued once recognised as an arterial bleed.

ii) Minimise bruising. Bruising is almost inevitable following arterial puncture. The arm should be elevated in a vertical position, and direct pressure applied over the site by the donor attendant (this should not be left to the donor). Pressure must be maintained for at least five minutes. Once this period has elapsed the arm should be rested in an horizontal position and the site observed. A pressure dressing should be applied, the donor should be warned to avoid using the arm for heavy exertion, and given an explanatory leaflet on bruising.

iii) Ensure an adequate rest period to guard against fainting.

iv) Ensure that a full report is written. A note should be made on the 101 card 'Arterial Puncture.' Full details should be noted on the clinic report sheet or a separate note returned with the sheet. This is important, as arterial punctures occasionally lead to delayed complications (eg arterio-venous fistula) and compensation of the donor may be required. Hence full record keeping is crucial. Explain to the donor that the RTC will contact him/her, and ensure that a telephone number is obtained. If there is no number, and nowhere a message can be left, instruct the donor to ring the RTC and ask for Dr Markanday on the next working day.

NORTH LONDON BLOOD TRANSFUSION CENTRE, Deansbrook Road, Edgware, Middlesex HA8 9BD	DONOR CLINIC TECHNICAL GUIDE		
Revision No.	Issue date 12th September 1978	Page 1 of 1	No. 25.1.2

Subject: PERFORMANCE OF VENEPUNCTURE BY DONOR ATTENDANT STAFF

1 The circumstances in which Medical Officers may delegate performance of venepuncture to Registered General Nurses have been clearly defined be RHA and the necessary instructions issued from this office.

2 Delegation of performance of venepuncture to Donor Attendant Team Leaders for the purpose of obtaining laboratory samples has been left to those Team Leaders willing to perform the duty. All such delegation to Donor Attendant staff must now cease and Medical officers must resume personal responsibility.

3 This instruction is operative immediately.

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Revision No.	Issue date	Page 1 of 1	No. 30.1.1
Subject: PERFORMANCE BY REGISTERED GENERAL NURSES OF VENEPUNCTURE FOR BLOOD DONATION			

SCOPE:

These instructions apply to all RTC blood donor clinics.

GENERAL:

A Registered General Nurse may carry out venepuncture for blood donation provided that he/she

1 holds a current certificate of competence issued by RTC on behalf of the North West Thames Regional Health Authority (see appendix A)

2 has been instructed specifically to do so by the Director or other medical staff designated by him/her

3 is operating with a registered medical practitioner on the premises continuously throughout the period of donation and recovery

4 follows the procedures laid down for venesection for blood donation (section 30.1 of the Manual of Procedures).

NATIONAL BLOOD TRANSFUSION SERVICE
North London Blood Transfusion Centre
Deansbrook Road
Edgware, Middx.
HA8 9BD.

Telephone: 01-952 5511

Dr M. Contreras
Director

APPENDIX A

NORTH WEST THAMES REGIONAL HEALTH AUTHORITY

REGIONAL BLOOD TRANSFUSION CENTRE

I certify that.....has been instructed in the procedure of venepuncture and is competent to carry out this procedure in the following situations:-

(a) within the Blood Transfusion Centre as requested by the Director or other medical staff designated by him/her, with a registered medical practitioner on the premises.

(b) during donor clinics within the Region with a registered medical practitioner on the premises.

Director or designated
Medical Officer

_____

_____Sister/Charge Nurse

I confirm that I have been instructed in this procedure and feel competent and am willing to perform venepunctures. I agree to conform with the conditions set out in (a) and (b) above, and have read and signed the RHA policy statement printed on the reverse of this certificate.

_____Signature of Nurse

_____Date

THIS AUTHORISATION APPLIES DURING EMPLOYMENT WITH THE NORTH WEST THAMES REGIONAL HEALTH AUTHORITY.

NORTH WEST THAMES REGIONAL HEALTH AUTHORITY

NURSES UNDERTAKING THE PROCEDURE OF VENEPUNCTURE

AT THE NORTH LONDON BLOOD TRANSFUSION CENTRE

POLICY STATEMENT

Following the action required in HC(77)22:

1 The Regional Health Authority accepts that the procedure of venepuncture may be delegated.

2 The Regional Health Authority approves delegation by medical staff designated by the Director to Registered General Nurses only.

3 The nurse must receive adequate training in the procedure from designated medical staff and be assessed by them and the nurse in charge as being competent to undertake the procedure.

4 The nurse shall hold a certificate stating that she has received instruction and is competent and willing to carry out the procedure. This certificate will be signed by medical staff responsible for the training of the nurse.

5 The designated medical staff who have delegated this procedure, will be in no way absolved of their total clinical responsibility to the donor. A medical officer will always be on the premises during donor clinics.

6 The Regional health Authority will take steps to protect a nurse's interest in the event of a donor claiming that he or she has suffered through the nurse's negligence connected with this delegated procedure.

7 Nurses are advised to be members of a professional organisation or Trade Union.

.....Signature of Nurse

.....Date

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Revision No.	Issue date	Page 1 of 2	No. 60.1
Subject: DIAGNOSIS AND TREATMENT OF CARDIAC ARREST			

PURPOSE:

To establish criteria of cardiac arrest and initiate resuscitative measures.

SCOPE: These instructions apply to Deansbrook Road Clinic only.

GENERAL:

1 Although cardiac arrest is a rare occurrence, the prompt diagnosis and treatment can result in complete recovery.

2 The diagnosis of cardiac arrest must be made rapidly to avoid irreversible brain damage which takes place after 3 to 6 minutes.

3 Summon help,and note the time. Call the Coronary Care Unit at Edgware General Hospital, by asking our telephonist for extension 242. This is our emergency line directly connected to the hospital, and should never be used for any other purpose.

After care

Transfer the patient on the trolley direct to the Coronary Care Unit.

4 Initiate treatment with which all personnel must be familiar.

5 Send for equipment.

INSTRUCTION:

1 Diagnosis

1.1 Unconsciousness.
1.2 Ashen cyanotic colour.
1.3 Absence of carotid and femoral pulses.
1.4 Apnoea or gasping respiration.
1.5 Unsatisfactory ECG trace.

2 Restoration of the flow of oxygenated blood to the brain

2.1 Perform external cardiac compression on a firm flat surface at a rate of about 60-70/min allowing an inflation of the lungs every 4th compression.

2.2 Inflate lungs with expired air or Air-Viva bag with added oxygen, making sure that the chest expands denoting a clear airway.

2.3 Look for signs of an effective circulation.

2.3.1 Palpable

2.3.2 Improvement of colour

2.3.3 Dilated pupils becoming smaller

2.3.4 Return of respiration or spontaneous movement

3 Restoration of spontaneous heart action

3.1 Have a satisfactory lead I (R arm, L arm, L leg) ECG and i.v infusion established.

3.2 If ventricular fibrillation present, give D.C. shock of 200 joules: be prepared to repeat but continue cardiac compression and lung inflation.

3.3 If cardiac arrest present, give 0.5 ml 1 in 1000 adrenaline i.v. via fast-flowing drip. If no effect, give calcium gluconate 10% 5 ml i.v If no effect, give isoprenaline 0.2 mg i.v. Continue cardiac compression and lung inflation.

3.4 Sodium bicarbonate 8.4% 200 ml should be given after any period of inadequate circulation and will frequently improve restorative chances after arrest or ventricular fibrillation.

3.5 If myocardium remains irritable after defibrillation then give Lignocaine 1% 10 ml i.v.

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Revision No.	Issue date	Page 1 of 2	No. 60.2

Subject: MANAGEMENT OF FAINTING OR COLLAPSE DURING OR IMMEDIATELY FOLLOWING BLOOD DONATION

PURPOSE:

To establish the instruction to be followed regarding recognition and treatment of collapse or loss of consciousness associated with blood donation.

SCOPE:

These instructions apply to all locations where blood donation takes place.

GENERAL:

1 The reaction which takes place after some donations is usually a "faint" or vaso-vagal attack which causes loss of consciousness and occasionally vomiting or convulsions.

2 This readily responds to simple measures but the donor must be protected from the hazards of vomiting or loss of consciousness.

3 Occasionally persistent postural hypotension is seen; corrected by the head-down position but recurrent each time the donor sits up.

4 Rarely there could be cardiac arrest and then the recognition and treatment of this condition would have to be rapidly initiated.

INSTRUCTION:

1 All personnel must have received instruction in these procedures and know where the emergency resuscitation equipment is kept.

2 <u>Signs and symptoms of donor reactions</u>

2.1 Pallor.
2.2 Feeling of faintness.
2.3 Warmth or sweating.
2.4 Nausea.
2.5 Hyperventilation.
2.6 Convulsive movements.

3 Donor reactions

3.1 Fainting

3.1.1 a Lie subject flat and raise the feet or foot end of couch.

3.1.2 b Make sure respiration is present through a clear airway.

3.1.3 c Record blood pressure and pulse rate.

3.2 Nausea and vomiting

3.2.1 If only nauseated, instruct donor to take slow deep breaths.

3.2.2 If vomiting, cope with this, maintain a clear airway and make as comfortable as possible.

3.3 Convulsions

3.3.1 Prevent donor from injuring himself by gentle restraint and tongue biting by a padded blade between the teeth.

3.3.2 Maintain a clear airway.

3.4 Persistent hypotension

3.4.1 Keep subject flat with raised feet.

3.4.2. Record blood pressure and watch carefully.

3.4.3 Maintain rest until recovery. Referral to the family doctor or hospital may be necessary: the Medical Officer will assess each case, and refer if appropriate.

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Subject: MANAGEMENT OF INCOMPATIBLE BLOOD TRANSFUSION IN PLASMAPHERESIS

PURPOSE:

To establish the procedure to be followed on recognition of symptoms indicating a haemolytic reaction during auto-transfusion.

SCOPE:

These instructions apply to all locations where plasmapheresis is undertaken.

GENERAL:

1 The most important concept to be emphasized here is <u>prevention</u> which can be done by carefully rechecking information on the blood pack, asking donor's name, checking donor's medical file, matching donor's signature and matching luggage label portions before cells are reinfused.

2 The autotransfusion should be started at a rate not exceeding 60 drops per minute for the first 2 minutes and during this period close observation of the individual is mandatory.

3 Once the error has been committed, it cannot be stressed too strongly that <u>early recognition of the signs and symptoms of a haemolytic reaction may prevent any serious sequelae.</u>

4 Thus, at the first sign of flushing, rapid pulse, restlessness, shortness of breath, chills, fever, headache, chest or flank pain, nausea and vomiting, the procedure described under the instruction section below must be initiated.

1 Discontinue the transfusion immediately but keep the intravenous line open with saline, running in at a rate of 60 drops per minute, using a fresh giving set. Call the Medical Officer who is on duty.

2 Obtain two sequestrine blood samples from the donor's other arm, separate the plasma immediately from one and examine it for haemolysis. The samples should be saved for quantitative haemoglobin and haptoglobin determinations, as well as a baseline blood urea nitrogen. Forward them to the appropriate laboratory where the donor is to be admitted.

3 Without waiting for the results of (2) above, immediately begin the intravenous infusion of 200 ml. of a 10% solution of mannitol, which is to be completed within 15 minutes. Diuresis of 1 to 3 ml. of urine per minute should be obtained with this dose.

4 Carefully record the blood pressure and pulse every 3 to 5 minutes.

5 Obtain a urine sample and have it examined for haemoglobin.

6 DO NOT USE VASOPRESSOR DRUGS!

7 Arrange to admit patient to a hospital under care of the consulting physician on duty.

8 In treatment of donor, please seclude him from the other donors and personnel by using a screen around his couch. This will allow for privacy in taking urine samples.

9 Donor is to be kept covered while being treated and blankets are provided.

10 Donor is to kept on the couch at all times and not allowed to walk or sit up. Strive to keep donor comfortable.

11 Procedure followed in the management of the incompatible blood transfusion must be written down and a copy sent with donor to the admitting hospital.

12 The following is to be recorded:

12.1 Observations: (Signs, Symptoms, Time).
12.2 Attending Medical Officer and nurse.
12.3 Discontinued transfusion (state time).
12.4 Emergency procedure began (state time and describe procedure used).
12.5 Blood sample taken at: (Time).

1 Centrifuged at: (Time)
2 Observation of plasma: (Describe).

12.6 10% mannitol intravenous began at: (Time)
12.7 Blood pressure: (record every 3-5 minutes).
12.8 Pulse: (Record every 3-5 minutes).
12.9 Urine sample taken at: (Time) (Intervals of 15 minutes).

1. Amount:
2. Observations: (Describe)

12.10 Ambulance arrived at: (Time).
12.11 Admitted to: (Name of Hospital).

The Medical Officer on duty at each location where plasmapheresis is undertaken will sign this instruction thereby signifying concurrence with the Medical Director. Any points of disagreement should immediately be reported to him.

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