

GUIDELINES FOR SPERM BANKS AND USE OF  
SPERM BANK FACILITIES

1st Update	1993	Annex1 - Genetic Enquiry Checklist for Donor 1) Inclusion of Muscular Dystrophy or 1st degree relative (Muscular System) 2) Inclusion of Osteogenesis Imperfecta I (Skin and Connective Tissue Disorder)
2nd Update	Mar 1994	Section D - Age range for recipient suitability

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(A) GUIDELINES FOR DONOR RECRUITMENT

Canvassing of donors should be discreet and utmost confidentiality of donors and recipients ensured. Recruitment can be by word of mouth, and through notices placed in strategic places. Reimbursement of expenses incurred by the sperm donor is permitted. The target groups include:

- a) medical and other university students
- b) junior college, technical college and teacher training college students
- c) male nursing students
- d) national servicemen of officer calibre
- e) blood donors
- f) spouses of successfully treated subfertility or obstetric patients including invitro fertilisation (IVF) successes
- g) pre-vasectomy candidates
- h) donor replacements recruited by recipients and
- i) exchange of semen with banks of countries with similar stringent criteria for donor recruitment and screening.

(B) GUIDELINES FOR DONOR SCREENING

1.1 Aim of Screening

- not to introduce any morphological characteristic which is not already present in the recipient couple.
- exclude transmission of infectious or genetic illnesses.

1.2 Basic Criteria

- a) Age range 18-40 years
- b) Physically and mentally healthy with no known medical, surgical or family history.
- c) Must not be homosexuals.

1.3 Donor Examination

I History Taking

An interview is conducted to determine the following:-

- a) Educational level and occupation. Workers exposed to toxic wastes or hazards of irradiation should be excluded.
- b) Marital status.
- c) Fertility and sexual history.
- d) Past medical history eg. hepatitis, syphilis or gonorrhoea.
- e) Social status.
- f) Psychological status. Motivation of sperm donation.
- g) Family history of medical disorders eg. diabetes, epilepsy or mental deficiency.
- h) Family or personal history of genetic illness (See Annex 1 for genetic enquiry checklist).
- i) Medication that donor is on eg steroids.

## II Physical Examination

A detailed physical examination with emphasis on physical characteristics such as ethnic origin, body proportion, hair and eye colour should be made. If indicated, the complexion of the donor should be specified.

## III Laboratory Investigations

- 1) Haematological screen to exclude thalassaemia and other haemoglobinopathies.
- 2) Blood typing of ABO and Rh groups.
- 3) Blood tests to exclude transmissible diseases such as hepatitis (HBsAg test), acquired immuno deficiency syndrome (anti HTLV III test), syphilis (VDRL test) and gonorrhoea (semen culture for N gonorrhoeae).
- 4) Sperm survival and penetration tests should be carried out. An acceptable seminal profile should show adequate cryosurvival.
- 5) The following tests should be done where indicated to eliminate the risk of infection and transmission of diseases:-
  - Karyotyping to exclude genetically transmissible diseases
  - Urine for microscopic examination and culture
  - Semen culture for mycoplasma, chlamydia, aerobic and anaerobic pathogens.
  - chest X-ray.

(C) GUIDELINES FOR SPERM COLLECTION

Donor should abstain from sex for 4-5 days prior to donation. He should be free of intercurrent illnesses such as upper respiratory tract infection. Prior to semen collection, the donor should wash himself. Semen is then collected by masturbation into a wide mouthed plastic collection jar and handed to the personnel at the Sperm Bank.

(D) GUIDELINES FOR USE OF SPERM BANK FACILITIES

Indications for AID treatment

- 1) Absolute male sterility
- 2) Infertility from severe abnormalities of the semen
- 3) Inheritable diseases in the husband's line
- 4) Intractable immunological infertility
- 5) Others eg. failed vasectomy reversal, Rh negative female partner

Contra-indications to AID treatment

Where pregnancy is contra-indicated in the recipient because of medical or psychological reasons eg. severe uncontrolled diabetes, malignancy, hereditary diseases or blood incompatibilities etc.

Recipient Suitability

- 1) Married woman with a stable relationship
- 2) Age range : 20 - 45 years \*
- 3) Normally, the duration of infertility should be for at least 3 years
- 4) Absence of adverse tubal factors eg. tubal occlusion
- 5) Ovulatory or capable of responding to ovarian stimulation

\* Women between 40 and 45 years of age can be accepted as recipients, provided they have less than 3 children born out of their current marriage and they are adequately counselled. Treatment must be stopped when the woman turns 45 years of age.

Recipient should be immunised against rubella if she is antibody negative.

A copy of the consent form from the recipient and spouse must be sent to the Sperm Bank and kept indefinitely.

(E) GUIDELINES FOR SPERM PROCESSING AND STORAGE

Semen must be quarantined for 6 months and can only be used after the donor has been shown to remain antibody negative to acquired immuno-deficiency syndrome (AIDS) and hepatitis B, with two negative laboratory tests done 6 months apart.

(F) GUIDELINES FOR RECORD KEEPING

Good records are crucial to the effectiveness of running the Sperm Bank. Records of all donors and recipients must be kept. This would prevent repeated usage of some donors. Each donor should not father more than three viable pregnancies.

Computerisation will be required at the Sperm Banks. Annex 2A gives the particulars of donors required and Annex 2B lists the particulars of recipient required.

(G) GUIDELINES FOR PAYMENT (REIMBURSEMENT  
OF DONORS) AND CHARGING OF SPERM SAMPLES

There should not be payment of sperm donors or for sperm samples. It must be made clear to donors and recipients that reimbursement of donors is for expenses incurred, and charges for sperm samples are for processing and storage costs.

(H) LIST OF SPERM BANKS IN SINGAPORE

The Sperm Banks in Singapore are as follows:-

(1) National Sperm Bank

Kandang Kerbau Hospital (KKH) at  
Hampshire Road, Singapore 0821

Satellite Sperm Banks

Singapore General Hospital (SGH) at  
Outram Road, Singapore 0316

National University Hospital (NUH) at  
5, Lower Kent Ridge Road, Singapore  
0511

## GENETIC ENQUIRY CHECKLIST FOR DONOR

Systems	Absolute Contra-indication	Relative contraindication with a cumulative risk factor
1) Cardiovascular System	<ul style="list-style-type: none"> <li>- Myocardial Infarction at &lt; 40 years of age in a donor or a 1st degree relative</li> <li>- Cardiomyopathy</li> <li>- 2 or more cases of congenital heart disease</li> </ul>	<p>Myocardial infarction in a relative who is not of 1st degree relation</p> <p>Isolated case of congenital heart disease</p>
2) Haematological System	<ul style="list-style-type: none"> <li>- Blood clotting disorder</li> <li>- Haemoglobinopathies eg thalassaemia</li> </ul>	G6PD deficiency
3) Neurological	<ul style="list-style-type: none"> <li>- Epilepsy in donor or multiple cases of epilepsy in family</li> <li>- Neural tube defect in donor</li> <li>- Neurofibromatosis</li> <li>- Disseminated sclerosis in donor</li> <li>- Chorea</li> </ul>	<p>Isolated cases of epilepsy in family</p> <p>Neural tube defect in relative</p> <p>Cerebral vascular accident</p> <p>Disseminated sclerosis in relative</p>
4) Psychiatric	<ul style="list-style-type: none"> <li>- Schizophrenia in donor or 1st degree relative</li> <li>- Depression with suicidal tendencies</li> <li>- Mental retardation</li> </ul>	Schizophrenia in other relatives
5) Muscular System	<ul style="list-style-type: none"> <li>- Myasthenia gravis in donor</li> <li>- Myotonia</li> <li>- Muscular dystrophy or 1st degree relative</li> </ul>	Myasthenia gravis in other relatives
6) Locomotor System	<ul style="list-style-type: none"> <li>- Ankylosing Spondylitis with HLA B27</li> <li>- Multiple cases of talipes</li> </ul>	<p>Ankylosing Spondylitis with other HLA types</p> <p>Isolated case of talipes</p>

Systems	Absolute Contra-indication	Relative contraindication with a cumulative risk factor
Locomotor System (Contd)	<ul style="list-style-type: none"> <li>- Congenital dislocation of hip on two or more generations</li> <li>- Syndactyly of 2nd or 3rd digits is acceptable. Other syndactylies in donor or 1st degree relative (if bilateral malformation) is excluded</li> </ul>	<p>Isolated case of congenital hip dislocation</p> <p>Nil cases of dwarfism is judged individually eg. a donor with one achondroplastic child is acceptable</p>
7) Skin and Connective Tissue Disorder	<ul style="list-style-type: none"> <li>- Marfan's Syndrome</li> <li>- Severe Psoriasis in donor</li> <li>- Osteogenesis Imperfecta Type I</li> </ul>	Mild psoriasis in donor or psoriasis in relative
8) Organic Disease	<ul style="list-style-type: none"> <li>- Gastrointestinal : Intestinal polyposis or History of several types of colonic cancer</li> <li>- Renal : Polycystic kidneys, Renal failure on dialysis</li> </ul>	
9) Metabolic/ Endocrine Disease	<ul style="list-style-type: none"> <li>- Insulin dependent diabetes (IDDM) in donor or several family members</li> </ul>	<p>Isolated family member with IDDM</p> <p>Mucopolysaccharidoses</p> <p>Hyperlipidemia</p> <p>Thyroid disease</p>
10) Eye/ENT	<ul style="list-style-type: none"> <li>- Congenital cataract in donor</li> <li>- Hare-lip and cleft palate in donor or several cases in family</li> </ul>	<p>Congenital cataract in other relative</p> <p>Colour blindness</p> <p>Glaucoma</p> <p>Isolated case of hare lip and cleft palate in family</p>

NB - Malignancies of any system are absolute contraindications

- Asthma, eczema or allergies of any sort are cumulative risk factors

In the final analysis, if a complete family history is not available, then the donor can be accepted unless there are obvious pathological abnormalities in the donor or any of his children.

AID DONOR

I) Personal Particulars:

NRIC/Passport No. :

Date of Birth : 

Day
<input type="text"/> <input type="text"/>

Month
<input type="text"/> <input type="text"/>

Year
<input type="text"/> <input type="text"/>

Ethnic Group :  1 Chinese  2 Malay  
 3 Indian/Pakistani  9 Others

Marital Status :  1 Single  2 Married  
 3 Div/Sep/Wid  4 Steady/Engaged

No. of living children:

Blood Donor :  1. Yes  2. No.

Address : \_\_\_\_\_

Tel No : \_\_\_\_\_

II) Social History (including educational achievements and occupation) :

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Medical Conditions	Yes/No.	Specify if yes
1) Myocardial infarction		
2) Cardiomyopathy		
3) Congenital heart disease		
4) Blood clotting disorder		
5) G6PD deficiency		
6) Haemoglobinopathies		
7) Epilepsy		
8) Neural tube defect		
9) Neurofibromatosis		
10) Disseminated sclerosis		
11) Chorea		
12) Cerebral vascular accident		
13) Schizophrenia		
14) Mental retardation		
15) Depression with suicidal tendencies		
16) Myasthenia gravis		
17) Myotonia		
18) Ankylosing spondylitis		
19) Talipes		
20) Congenital dislocation of hip		
21) Syndactyly		
22) Marfan's Syndrome		
23) Psoriasis		
24) Intestinal polyposis		

Medical Conditions	Yes/No.	Specify if yes
25) Colonic cancer		
26) Polycystic kidneys		
27) Insulin dependent diabetes		
28) Mucopolysaccharidoses		
29) Hyperlipidemia		
30) Thyroid disease		
31) Congenital cataract		
32) Colour blindness		
33) Glaucoma		
34) Hare-lip		
35) Cleft palate		
36) Autoimmune deficiency syndrome (AIDS)		
37) Hepatitis		
38) Sexually Transmitted Disease		

IV) Morphological Characteristics :

Hair Colour : \_\_\_\_\_

Eye Colour : \_\_\_\_\_

Complexion : \_\_\_\_\_

V) Result of laboratory investigations :

a) Blood type : \_\_\_\_\_

b) Haematological screen: \_\_\_\_\_

c) HBs Ag : \_\_\_\_\_

d) Seminal Analysis : \_\_\_\_\_

e) Karyotype (Optional): \_\_\_\_\_

f)

Test	Dates			
*Semen Culture for organism				

\*Test to be repeated at every visit

g)

@ Blood Test	Dates			
VDRL				
Anti HTLV III				

@ Test to be repeated 6 monthly

(VI) AID DONOR STATEMENT OF CONSENT

1. I offer my services as a donor of semen with the understanding that it is your intention to use my semen for the purpose of artificial insemination.
2. I understand that the identity of any recipient shall not be disclosed to me nor shall I attempt to find out the identity of any recipient.
3. To the best of my knowledge, information and belief, I am in good health and I have no communicable disease such as AIDS, hepatitis and sexually transmitted disease, and I do not know of nor have I suffered from any physical, mental or psychological impediment, disability or abnormality, whether inherited or as a result of any disease, ailment or accident.
4. To the best of my knowledge, information and belief, none of my relatives have suffered from diabetes, epilepsy, mental deficiency, congenital abnormality nor any inheritable diseases.
5. I never had urethral discharge, urinary infection, frequent or painful passage of urine.
6. While I am a donor, if I suffer from a venereal infection, urethral discharge or urinary symptoms, I agree to notify the staff of the AID Service immediately.
7. For the purpose of determining whether I am acceptable as a donor of semen, I consent to a physical examination including the taking of blood, urine and semen by you or any other doctor or medical worker whom you may designate.
8. I agree never to seek the identity of any child born following upon artificial insemination of any recipient of any semen nor seek to make any claim in respect of such child or children in any circumstances whatsoever.

I have \_\_\_\_\_ children

I am/am not a blood donor

My blood group is \_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_.

Signed by \_\_\_\_\_  
Signature Donor NRIC

in the presence of \_\_\_\_\_  
Signature Doctor NRIC

and \_\_\_\_\_  
Signature Witness NRIC

(VII) Whether sperm sample accepted for AID programme :

Date	Yes/No

RECIPIENT OF AID PROGRAMME

I) Personal Particulars:

Name : \_\_\_\_\_

NRIC/Passport No. : 

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Date of Birth : 

Day	Month	Year

Ethnic Group :  1. Chinese  2. Malay  
 3. Indian/Pakistan  9. Others

II) Particulars of Spouse:

Name : \_\_\_\_\_

NRIC/Passport No. : 

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Date of Birth : 

Day	Month	Year

Ethnic Group :  1. Chinese  2. Malay  
 3. Indian/Pakistan  9. Others

Morphological Characteristics :

Hair Colour : \_\_\_\_\_

Eye Colour : \_\_\_\_\_

Complexion : \_\_\_\_\_

Height : \_\_\_\_\_

Blood Group : \_\_\_\_\_

III) Marital History:

No. of years married : 

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No. of years infertile : 

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Other information eg. previous marriage; offspring from previous marriages etc.

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IV) Indication for AID (including relevant information on other types of fertility treatment attempted).

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V) Result of AID treatment :

Date/s of insemination	Donor identification No.	Pregnancy (Biochemical/Clinical)	Abortion Date (if applicable)	Date of Delivery (if applicable)

VI) Consent from Recipient and Spouse :

I) I agree to artificial insemination with donor sperm, and I will not hold with Sperm Bank responsible for any mishaps arising out of properly conducted AID procedures, or in the event of a baby born with congenital abnormalities or any other defects which can be attributed to donated sperm.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_

Signed by \_\_\_\_\_  
Signature Name of Recipient

in the presence of \_\_\_\_\_  
Signature Doctor

II) Consent from Spouse :

I agree for my wife to have artificial insemination with donor sperm and I will not hold the Sperm Bank responsible for any mishaps arising out of properly conducted AID procedures, or in the event of a baby born with congenital abnormalities or any other defects which can be attributed to donated sperm.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_

Signed by \_\_\_\_\_  
Signature Name of Recipient's Husband

in the presence of \_\_\_\_\_  
Signature Doctor

and \_\_\_\_\_  
Signature Witness

APPLICATION FORM FOR SPERM SAMPLES

A) Name of Doctor: \_\_\_\_\_

Name of Clinic/Hospital: \_\_\_\_\_

B) The Recipient:

1) Name : \_\_\_\_\_

2) NRIC/Passport No:

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3) Date of Birth :      Day                      Month                      Year  

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4) Ethnic Group :     1 Chinese                       2 Malay  
                          3 Indian/Pakistani       9 Others

5) Marital Status :     1. Single                       2. Married  
                          3. Div/Sep/Wid

6) Duration of infertility 

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7) Morphological Characteristics:

Hair Colour: \_\_\_\_\_

Eye Colour: \_\_\_\_\_

8) Indication for AID treatment:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9) Relevant medical/genetic history:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10) Tubal Occlusion :  1. Yes  2. No.

11) Response to ovarian stimulation :  1. Good  3. Nil  
 2. Poor

C) Spouse of the Recipient :

1) Name : \_\_\_\_\_

2) NRIC/Passport No: 

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3) Date of Birth : 

Day	Month	Year

4) Ethnic Group :  1 Chinese  2 Malay  
 3 Indian/Pakistani  9 Others

5) Morphological Characteristics :

Hair Colour : \_\_\_\_\_

Eye Colour : \_\_\_\_\_

Height : \_\_\_\_\_

Complexion : \_\_\_\_\_

For official use :

Application is  Approved

Rejected