



## CENTRE FOR ASSISTED REPRODUCTION

Block 5 Level 1  
Department of Obstetrics and Gynaecology  
Singapore General Hospital  
Outram Road, Singapore 169608  
mysgh@sgh.com.sg | SGH website: www.sgh.com.sg

### Enquiries

Tel: 65-6321 4292 (2.00 pm to 4.30 pm)  
Fax: 65-6221 2468

### Appointments

Tel: 65-6321 4377 (Office hours)  
Email: [appointments@sgh.com.sg](mailto:appointments@sgh.com.sg)  
Fax: 65-6224 9221

### Overseas Referral

via SGH International Medical Services (IMS)  
Tel: 65-6326 5656  
Email: [ims@singhealth.com.sg](mailto:ims@singhealth.com.sg)  
Fax: 65-6223 6094

### Clinic Operating Hours

Mon-Fri: 8.00 am to 5.00 pm  
Sat: 8.00 am to 12.00 pm (By appointment only)

### SEMEN SAMPLE TEST

Obstetrics & Gynaecology Centre, Room 12  
Block 5 Level 1  
Tel: 65-6326 5925  
Mon to Sat: 8.30 am to 9.30 am  
(By appointment only, for submission of semen sample)

Registration No: 198703907 Z  
Information correct as at May 2019

PATIENTS. AT THE HEART OF ALL WE DO.

# Helping you start your family

## Centre for Assisted Reproduction



Singapore  
General Hospital  
SingHealth

## When should you seek help?

**Infertility is a common problem that can affect 1 in 7 couples. 80% of couples having regular unprotected sex should conceive within one year. For the remaining 20% who do not conceive, about half will do so in the second year.**

**If you have not conceived after one year of regular intercourse without the use of any contraception, it is recommended that you see a doctor. As both the number and quality of eggs decline with age, it is important to seek medical help early especially if the woman is over 35 years old.**

## About Centre for Assisted Reproduction (CARE)

CARE is a one-stop fertility centre that aims to assist you in your journey to have children of your own. We have over 30 years of experience and more than 2500 healthy babies born through assisted reproduction techniques.

Our team of highly trained and experience doctors, nurses and embryologists work hand in hand to provide you with individualized treatment. Equipped with advanced technology and trained in the latest procedures, we aim to use the least invasive treatment for the best possible outcome.

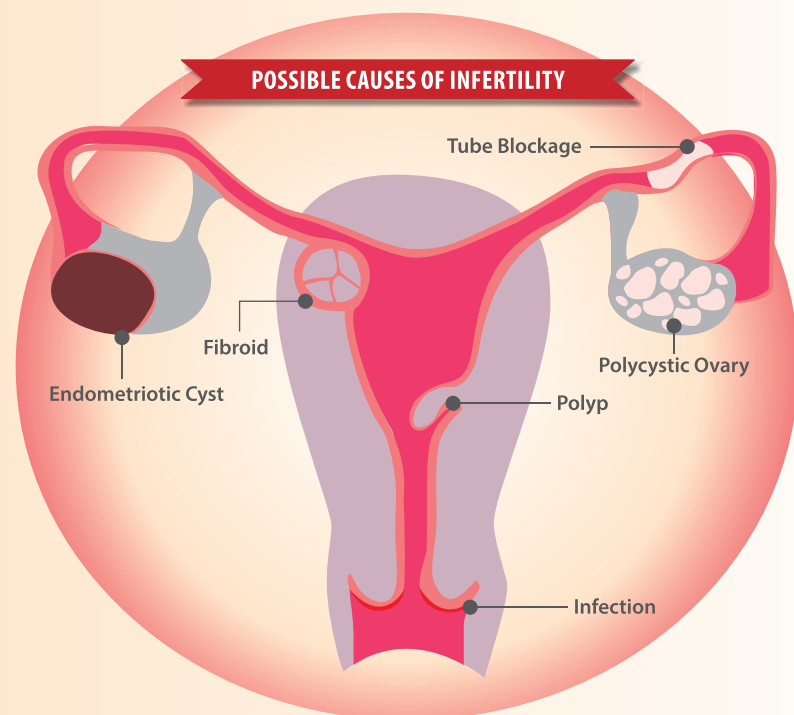
# Common causes of infertility

## FEMALE

- Damaged or blocked fallopian tubes
- Problems with ovulation such as polycystic ovary syndrome
- Endometriosis
- Fibroids and polyps
- Early menopause
- Advanced maternal age

## MALE

- Low sperm count or poor sperm motility
- Absent or no sperm



# Identifying the problem

We will perform a series of tests to find the possible cause for subfertility:

## 1. TESTING OF EGG RESERVE

We do blood test and ultrasound for egg reserve.

## 2. TESTING OF OVULATION

To confirm ovulation, i.e. that an egg was released in each menstrual cycle, we do blood and/or urine tests to monitor your hormones. For women with irregular menstruation blood tests for Prolactin and Thyroid function may also be ordered.

## 3. TRANS-VAGINAL ULTRASOUND

A pelvic ultrasound scan allows visualization of the shape, position and size of the womb and ovaries. Abnormalities like fibroids, polyps, ovarian cysts and polycystic ovaries can be seen. This is performed by inserting a probe into vagina.

## 4. TUBAL ASSESSMENT

There are different tests to check for problems with the fallopian tubes that may prevent sperm from reaching the egg. Your doctor will discuss and decide the most suitable test for you.

### Tubal Contrast Sonogram (TCS)

This is a special scan where solution is "injected" into the womb to assess if your tubes are functioning.

This procedure maybe painful but is generally well tolerated. Most common side effects include abdominal cramps, vaginal discharge and bleeding. Rarely, pelvic infection can occur.

### Hysterosalpingogram (HSG)

This is a special X-ray examination of the womb and fallopian tubes, where a small amount of dye will be administered through the vagina into the womb, via a small cannula. The radiologist will observe the flow of this dye and X-rays will be taken to document the procedure.

This procedure can provide a clearer picture than TCS and if necessary, the tubes may be canalized to "open" them. Sometimes the doctor may ask you to undergo keyhole surgery for evaluating your tubes.

## 5. MALE PARTNER EVALUATION

In about one third of the couples, the male partner is the primary cause of sub-fertility. Hence we check the semen for:

- Concentration: the number of sperm per millilitre of sperm
- Motility: the percentage of moving sperm
- Morphology: the percentage of normal shaped sperm

For semen analysis, an appointment has to be made in advance. Patients are advised to clear their sperm and refrain from intercourse 3 days prior to the appointed test date.

### Method of collection

Semen is collected strictly by masturbation. Do not use normal condoms to collect the semen as they contain spermicides.

\*If you should prefer to collect semen in the condom with sexual intercourse, please inform the CARE nurse to purchase a suitable type.

### What to expect

Semen quality may vary with age, illness, season, sexual activity and smoking. Hence, a second sample may be required if the first semen test is abnormal.

In men with very poor sperm count or absent sperm, additional specimens and further blood tests for hormones and chromosomes may be needed to plan the treatment.

# Our assisted reproductive services

## 1. BASIC OVULATION MONITORING (BOM)

This is performed to assess ovulation, i.e. to identify the ideal time to try for a pregnancy.

Tests include a series of ultrasound scans to look at the size of the follicle containing eggs, or use of urine strips which you can test by yourself. Hormone injections may be necessary to promote final maturation of the follicle containing the eggs. This may be done in combination with IUI.

## 2. INDUCTION OF OVULATION

Clomiphene or Letrozole are oral medications used to stimulate hormones to promote growth of the eggs. It may take several cycles to find the right dosage.

### Parenteral Induction of Ovulation (PIO)

PIO is another form of ovulation induction where hormone injections are used instead of oral medication. It is used when a patient fails to respond to oral medication and the fallopian tubes are functioning. It is usually combined with Intra-uterine Insemination (IUI).

### What to expect

- Daily injections for about 2 weeks to stimulate the development of 1 to 3 follicles in the ovary.
- Serial ultrasound scans and blood tests may be performed.
- When largest follicle (containing the egg) is deemed ready, an injection is given to release the egg.
- IUI is usually performed 1 day after the injection.
- Urine pregnancy test will be performed about 2 weeks after ovulation.
- The cycle may be abandoned if too many or no eggs are produced.

### 3. INTRA-UTERINE INSEMINATION (IUI)

This involves introducing processed sperm into the womb through a fine catheter during ovulation. Doctor will assess and screen the suitability for couple prior to selection for IUI.

#### What to expect

- Success rate is approximately 5% per cycle
- IUI is usually done in combination with BOM, use of Clomiphene, Letrozole or PIO (see above).
- This is an outpatient procedure that takes about 20 minutes and is similar to a Pap smear.
- On the day of IUI, the husband needs to provide a semen sample in the morning.

### 4. ADVANCED PROCEDURES

#### 4.1. In-Vitro Fertilisation (IVF)

Hormonal injections are given for about 2 to 4 weeks to stimulate the follicle containing eggs in the ovary. Eggs are then collected and inseminated or injected with the husband's sperm in the laboratory. After fertilisation, the embryos are incubated for a few days before being placed into the womb. A successful pregnancy can be confirmed two weeks later.

#### 4.2 Intra-Cytoplasmic Sperm Injection (ICSI)

ICSI involves injecting a single sperm into each egg to allow fertilization to occur in the laboratory. This is recommended if the man has poor quality sperm or if there had been difficulties with fertilization in the past.

#### 4.3 Blastocyst Culture

In this procedure, embryos are cultured for 5 days to become a blastocyst. The chances of pregnancy are much higher with a blastocyst transfer. This is suitable for those with repeated IVF failure, multiple eggs and those who need Pre-implantation Genetic Diagnosis.

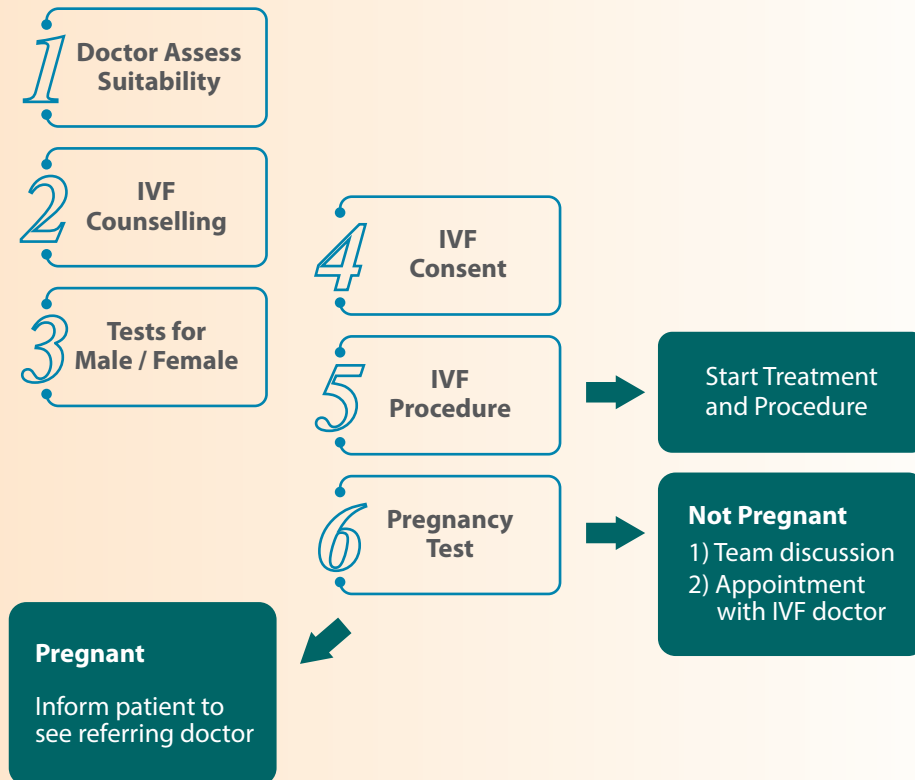
#### 4.4 Other services

Your doctor will discuss the following options with you if you are deemed suitable.

- In-vitro maturation of oocytes
- Embryo, egg and sperm cryopreservation
- Donor sperm, egg, embryo programs
- Pre-implantation Genetic Diagnosis (PGD)
- Pre-implantation Genetic Screening (PGS)

# Workflow for IVF

Patient can request for a medical appointment at CARE clinic by contacting our **Call Centre hotline (+65 6321 4377)**.



# Male fertility procedures

Men are contributory to a pregnancy. 1% - 2% of men have no sperm in their ejaculate. Sometimes they have poor quality sperms or are unable to deposit the sperm naturally in their partner. Such men would be assessed at our Male fertility clinic and treated with medications after further blood or semen tests.

If there is no sperm, a blockage may prevent the sperm from entering the ejaculate (known as obstructive azoospermia). In some men, the sperm production is so low that no sperm can make it to ejaculate. In such men, sperm can be retrieved directly from the testis or the epididymis. The procedure may be done under general anaesthesia or sedation. Your doctor may discuss these options with you at consult.



# Fertility preservation

Patients may become infertile due to certain, medical conditions such as cancer, or as a result of the treatment rendered such as chemotherapy or radiotherapy. We offer services that provide options to preserve fertility for both men and women.

## Autologous semen storage

Autologous semen storage is an option to preserve male fertility, by freezing and storing semen for future use. About 50% of the sperm will survive after thawing and chances for a successful pregnancy is approximately 10% - 30% depending on the future wife's age and egg count.

## Ovarian Tissue Cryopreservation

Ovarian tissue cryopreservation offers hope for future pregnancies by freezing ovarian tissue for those at risk. This is suitable for young female cancer patients below age 40 prior to chemotherapy or radiotherapy.

## How is it done?

- The ovary is harvested by keyhole surgery under anaesthesia.
- The outer layer of the ovary (ovarian tissue) containing immature eggs is dissected and cut into strips.
- The ovarian tissue is cryopreserved and kept at -196°C where the low temperature allows it to be viable for years.
- You will need a repeat surgery to re-implant the tissue in you.

## Other possibilities

- Freezing of eggs or embryos (fertilized eggs) may also be possible. However, this may require at least 2 weeks of hormonal injections and may cause delay in starting medical treatment.

# Regulatory and funding matters

## For In-Vitro Fertilization (IVF):

1. IVF counselling is mandatory under Ministry of Health guidelines.
2. There may be waiting time before starting program.
3. Limits on age and number of IVF attempts.

## For IVF and Frozen Embryo Transfer (FET):

Government co-funding and Medisave applicable if one of the spouses is a Singaporean and the wife must be under 40 years of age at the start of the IVF treatment. For more information, please refer to Ministry of Health website for guidelines.

## For Neonatal Insurance:

Following the introduction of MediShield Life and the MediSave Grant for Newborns, the Ministry has decided to remove the requirement for couples to purchase ARP insurance for neonatal care before undergoing IVF. This change will take effect from **1 April 2019**.

Notwithstanding the removal of the requirement, couples who wish to have additional coverage beyond MediShield Life and MediSave may still purchase ARP insurance or other maternity insurance plans in the private insurance market to meet their needs.

## Under Ministry of Health guidelines, CARE does not practice:

- Sex selection unless medically indicated.
- Social storage of gamete or embryos unless medically indicated.

# Frequently asked questions

## Q: When am I most fertile and how often should we be making love?

- Ovulation usually occurs 14 days before your period starts. This is the most fertile day of the cycle. If your cycle is 26 days long, then you will ovulate on day 12.
- Ideally you should start trying throughout the menstrual cycle at least every third day. Abstaining to 'build up' sperm reduces sperm count and quality and is not recommended.

## Q: How does age affect fertility?

- Women are less fertile after age 35 and fertility dramatically drops after 40 years.
- IVF is not a cure for age and we get very poor results over the age of 40 (less than 10% pregnancy rate).
- A woman's age also adversely affects the outcome of the pregnancy with increased miscarriages, ectopic pregnancies and genetic abnormalities.

## Q: Does weight affect fertility?

- Being overweight or underweight both have a dramatic effect on female fertility, with ovulation periods being irregular or absent.
- IVF is also not recommended if Body Mass Index is more than 35 or less than 19 as the chance of success is significantly lower with higher risks.

## Q: How can we improve the sperm count and quality?

- Quitting smoking, reducing alcohol intake and avoiding recreational drugs may significantly help to improve sperm count.
- Avoid hot baths and improve general fitness. Weight reduction may also help.
- It may take three months for the sperm count and quality to improve after lifestyle changes, so do not expect immediate results.

## Q: Does the love-making position have any effect on chances of conceiving?

There is no evidence that the position of lovemaking has any increased effects on pregnancy.

## Q: Can we have sexual intercourse during IVF program or after embryo transfer?

It is advisable to abstain from sexual intercourse until pregnancy test.

## Q: Is it compulsory to do the pregnancy blood test if I am experienced bleeding before the scheduled pregnancy test date?

Yes. You still need the blood test done on the scheduled pregnancy test date in order to confirm your pregnancy status.