



Centre for Women & Children



Clinic for **Human Reproduction**



What is the Clinic for Human Reproduction?

The Clinic for Human Reproduction (CHR) was established to address fertility issues in couples. Since its inception, it has served patients locally and internationally. An average of 700 fresh cycles of In-Vitro Fertilisation (IVF) is performed annually.

The clinic is staffed by specialised medical staff, as well as embryologists, who can provide the necessary support and assistance in a private and personalised manner.

With the same team of staff serving our patients in a comfortable and private setting, we aim to help them feel at ease and thus, better facilitate consultation and treatment throughout the duration of the fertility programme.



What is ART?

The Assisted Reproductive Technology (ART) programme at NUH is one of the leading programmes of its type with many breakthroughs in the field of assisted reproduction. Headed by Professor PC Wong (Head and Emeritus Consultant, Division of Reproductive Endocrinology & Infertility, Department of Obstetrics and Gynaecology) and supported by a team of specialists (embryologists, nurses and counsellors), the programme is committed to improving fertility through ART.

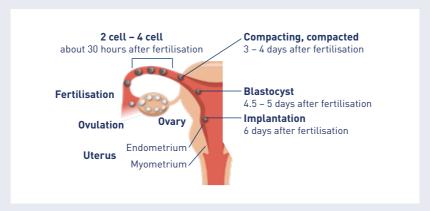
ART involves the use of one or several techniques to bring the egg and sperm together, eliminating the chance element to conception and reducing or removing the need for the sperm to swim through the cervix and the fallopian tubes to meet the egg. ART techniques have revolutionised the management of infertility. In most instances, ART involves recovering the eggs from the ovaries and fertilising them with sperm outside the body in the laboratory. The developing embryos are then replaced artificially into the uterus.

It has been able to achieve consistently high pregnancy rates through its IVF programme. With the latest emphasis on extended embryo culture, the IVF programme has maintained a high clinical pregnancy rate per embryo transfer.

What Are the Services Offered in CHR?

- In-Vitro Fertilisation (IVF)/Intracytoplasmic Sperm Injection (ICSI)
- Intrauterine Insemination (IUI)
- Blastocyst Culture
- Embryo Replacement
- Embryo Cryopreservation
- Assisted Hatching
- Sperm extraction from testicular biopsy specimens
- Percutaneous Epididymal Sperm Aspiration (PESA)
- Testicular Sperm Aspiration (TESA)
- Testicular Sperm Extraction (TESE)
- Micro-TESE (Microsurgical Testicular Sperm Extraction)
- Pre-Implementation Genetic Testing (PGT-A, PGT-M and PGT-SR)
- Oocyte Cryopreservation
- Sperm Cryopreservation
- Ovarian Tissue Cryopreservation
- Elective Egg Freezing





Pre-implantation development occurs in the fallopian tube and uterus during which the embryo cleaves to form a blastocyst¹.

What is IVF/ICSI?

IVF or In-Vitro Fertilisation is a process where fertilisation takes place in a petri dish (outside the human body). This procedure mimics the development of a fertilised egg that occurs naturally in the woman's reproductive tract as shown in the figure above.

It involves ovarian stimulation and egg retrieval. Shortly before egg retrieval, the husband's semen sample is collected and processed by a method called sperm washing. Intracytoplasmic Sperm Injection (ICSI) is used for fertilisation. This is when following oocyte retrieval, a single sperm is injected into each oocyte. The fertilised eggs are then cultured in a special medium for three to five days before they are replaced into the uterus of the patient.

¹ Reference from fig. 2 is taken from Principles of Anatomy and Physiology by Tortora and Grabowski 8th edition HarperCollins Publishing Inc.

What is IUI?

Intrauterine insemination (IUI) is a timed insemination following follicular tracking to ensure ovulation whereby treated sperm is introduced directly into the uterus. It is for patients who may demonstrate ovulatory dysfunction, poorer quality sperm, or for unknown causes of failed conception after repeated attempts.





Frequently Asked Questions

A) Who requires IVF?

Generally, IVF may be used in the following situations:

- When there is damage to the fallopian tubes such that sperm is unable to meet the egg.
- + Significantly reduced sperm count or abnormal sperm.
- + Women with irregular menses or severe endometriosis.
- + After failed intrauterine insemination (IUI).
- + Advanced maternal age and/or low ovarian reserve.
- + Couples who require donor sperm or eggs.
- + Fertility preservation before medical treatment.
- + Couples who need pre-implementation genetic testing.
- + Elective Egg Freezing.

B) How is IVF performed?

There are several stages in the procedure. The aims of the IVF treatment are:

- i. To stimulate the wife's ovaries to produce an optimum number of eggs.
- ii. To allow egg maturation and retrieval of eggs at a specific time.
- iii. To fertilise the eggs with the husband's sperm in the laboratory.
- iv. To replace the embryo in the uterus at a specified time.
- v. To support the implantation of the embryo.

C) How long does it take to complete one cycle?

It takes about 4 - 6 weeks.

D) What side effect and complication will I expect?

The most common complication from this programme is overstimulation of the ovaries as a result of hormone injections. This causes lower abdominal swelling, water retention, difficulty in breathing and discomfort. In CHR, this problem is minimised by careful selection of drug dosages and close monitoring of the follicular development. If necessary, the embryos will be

frozen to reduce this risk instead of a fresh transfer. The incidence of this complication is less than 2%.

In addition, there is a chance of multiple births with IVF. This is minimised by transferring one embryo at a time.

E) How much does it cost to complete one cycle?

It costs about \$17,180 - \$20,330 (inclusive of GST) to complete one cycle of IVF.

F) How much can I claim from Medisave?

Each couple can claim up to \$6,000 and \$5,000 respectively for the first and second cycle. For the third and subsequent cycles, each couple will be able to claim up to \$4,000.

The total amount of claimable Medisave for eligible patients is capped at \$15,000 per couple per lifetime, regardless of the number of cycles.

G) How much can I claim from ART Co-Funding?

IVF	SC – SC Couple*	SC – PR Couple*	SC – Foreigner Couple*
Fresh Cycle	75% of total amount, cap at \$7,700	55% of total amount, cap at \$5,700	35% of total amount, cap at \$3,600
Thaw Cycle	75% of total amount, cap at \$2,200	55% of total amount, cap at \$1,600	35% of total amount, cap at \$1,000

IUI	SC – SC Couple	SC – PR Couple	SC – Foreigner Couple
	75% of total	55% of total	35% of total
	amount, cap at \$1,000	amount, cap at \$700	amount, cap at \$500

^{*}At least one member of the couple must be a Singapore Citizen (SC)

^{*}Price subjected to final diagnosis and treatment received.

Notes

About the National University Centre for Women and Children

National University Centre for Women and Children (NUWoC) is a national university specialist centre that aims to empower women, children and their families to lead healthier lives. We provide comprehensive medical and surgical services ranging from pre-conception to child and maternal health.

NUWoC comprises the Department of Obstetrics & Gynaecology (0&G) and Khoo Teck Puat - National University Children's Medical Institute (KTP-NUCMI) of National University Hospital. It focuses on the right-siting of appropriate services in the community and builds complementary services in National University Health System's (NUHS) centres of excellence - Ng Teng Fong General Hospital and Alexandra Hospital.

Through a generous gift from the Estate of Khoo Teck Puat, KTP-NUCMI established an integrated outpatient facility with medical, diagnostic and rehabilitation services for children. We are also the only public specialist centre in Singapore that offers paediatric kidney and liver transplant programmes.

For more information about us, visit www.nuh.com.sg/NUWoC

Children's Emergency (24-hr)

NUH Main Building, Zone F, Level 1 Location

Contact +65 6772 5000

KTP-NUCMI

Location NUH Main Building, Zone E, Level 2

(Accessible via Kent Ridge Wing, Zone C, Level 2, Lift Lobby C)

Operating Hours 8.30am - 5.30pm (Mon to Fri), 8.30am - 12.30pm (Sat)
General Enquiry +65 6772 5736
Appointment Line +65 6908 2222

Email ktpnucmi appt@nuhs.edu.sq

9a Viva-University Children's Cancer Centre

Location NUH Medical Centre, Zone B. Level 9

Operating Hours 8am – 5.30pm (Mon to Fri)

Appointment Line +65 6772 5030

cbccappt@nuhs.edu.sq **Fmail**

NUH Children's Urgent Care Clinic @ Bukit Panjang

Location Junction 10. #01-22

Operating Hours 9am – 11pm daily (including public holidays)

General Enquiry +65 6219 1538

Fmail childrenucc@nuhs.edu.sq

NUH Child Development Unit @ JMC

Location Jurong Medical Centre, Level 2 Operating Hours 8.30am – 5.30pm (Mon to Fri)

Appointment Line +65 6665 2530 / 2531 Email cdu@nuhs.edu.sq

NUH Child Development Unit @ Keat Hong

Location Keat Hong Community Club, #03-01 Operating Hours 8.30am - 5.30pm (Mon to Fri)

Appointment Line +65 6769 4537/4637 Email cdu@nuhs.edu.sq

Clinic A22 NUWoC Children's Clinic @ NTFGH

Ng Teng Fong General Hospital Location Tower A - NTFGH Clinics, Level 2

Operating Hours 8.30am – 5.30pm (Mon to Fri)

Appointment Line +65 6908 2222

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