



NEWLIFE
FERTILITY CENTRE

Information Guide Infertility Investigation and Treatment

Guide for patients considering Fertility Treatment. It outlines the stages of the Investigative Cycle and treatment options at NewLife Fertility Centre

The Facts on Infertility

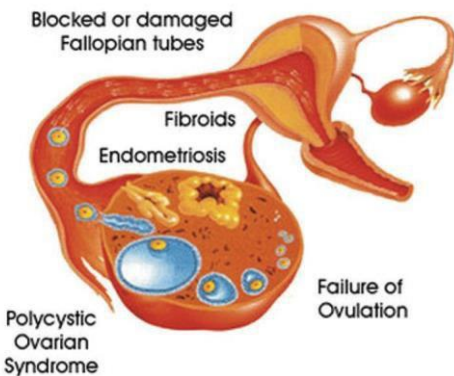
Infertility is defined as the inability to become pregnant after 12 months of unprotected intercourse.

Infertility causes hopes and dreams to collapse for people who want to have children of their own. With the myriad of medical, social, and environmental causes, one in 7 Canadian couples are unable to achieve a pregnancy naturally, and suffer from subfertility.

Causes of Infertility

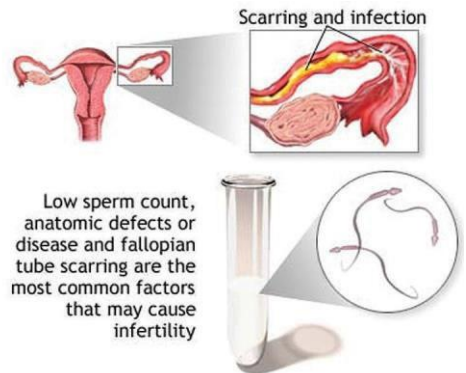
Female Factor:

Age, tubal, uterine, smoking, Polycystic Ovarian Syndrome (PCOS), Endometriosis, oocyte problems.



Male Factor:

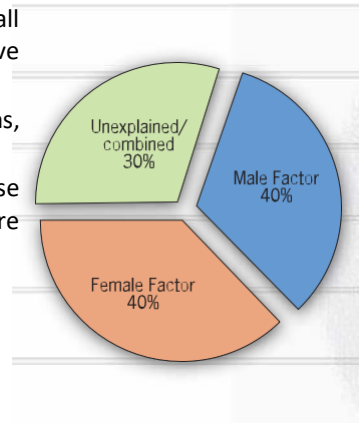
DNA damage, low sperm count or motility, genetic conditions.



Unexplained: When all tests are normal, but the patient is not able to conceive.

- In 10% of patients, no cause can be found at all (unexplained infertility) and when they do not conceive with conventional treatments, IVF may be recommended.
- These factors include: egg / sperm quality, egg wall problems, fertilization failure and implantation problems.
- In 30-40% of Recurrent Pregnancy Loss (RPL) cases no cause can be found. Treatment is empiric and most people are successful in achieving a live birth.

Combined: Both partners have conditions that affect fertility.



Investigative Cycle

Investigation Cycle

This is your first cycle to do the initial tests. Information is collected on your uterus, the endometrial lining, the size and number of follicles (eggs) and hormone levels during the cycle.

Stages in the cycle

The investigative cycle is comprised of 5 steps:

1. Cycle Monitoring (Blood Work and Ultrasound)
2. Sonohystrogram/Hysterosalpingogram (HSG)
3. Anti-Mullerian Hormone (AMH) Test
4. Semen Analysis
5. A review of results with your physician.

Step 1: Cycle Monitoring

Day 1 is the **first day** of menstrual bleeding (not spotting). Call on Day 1 to book bloodwork and US appointments for cycle Day 3, 10, and 12. Upon each visit, the nurse/physician will discuss your results.

Day 21 to 23 or one week after ovulation, you need a blood test for progesterone (P4), you do not need an appointment for blood tests only.



Most of your investigative cycle will be covered by OHIP. Any charges will be discussed with you.

Step 2: Sonohysterogram (SHG) and Hysterosalpingogram (HSG, Dye Test)

Sonohysterogram

Sonohysterography ("sono"), also known as saline infusion sonography, is a special, minimally invasive ultrasound technique. A small amount of saline solution is placed into the uterus by the doctor and then is viewed via ultrasound.

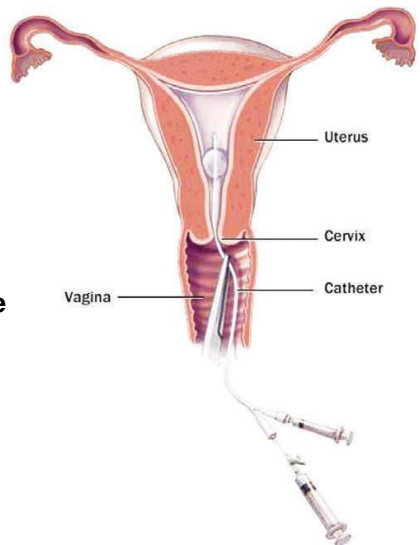
It provides pictures of the inside of your uterus to check the lining and to see if the fallopian tubes are open.



Hysterosalpingogram or Dye Test

An HSG (hystosalpingogram) or Dye Test is done to check whether the tubes are open and if the cavity is normal. It is similar to the Sono but done at the hospital.

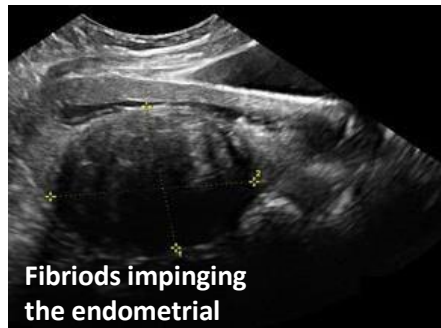
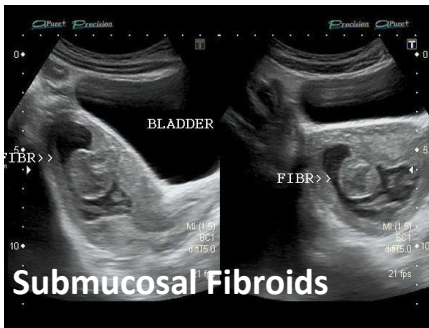
- The HSG test is a radiology procedure performed by your physician.
- Radiographic contrast (dye) is injected into the uterine cavity through the vagina and cervix. The uterine cavity fills with dye and if the fallopian tubes are open, dye fills the tubes and spills into the abdominal cavity.
- Dye test is booked between days 6 and 12 of the cycle and is done off the premises.
- **There is a charge of \$50 for the disposable catheter used for this test.**



What to Expect with Sonohysterogram (SONO) and Dye Test

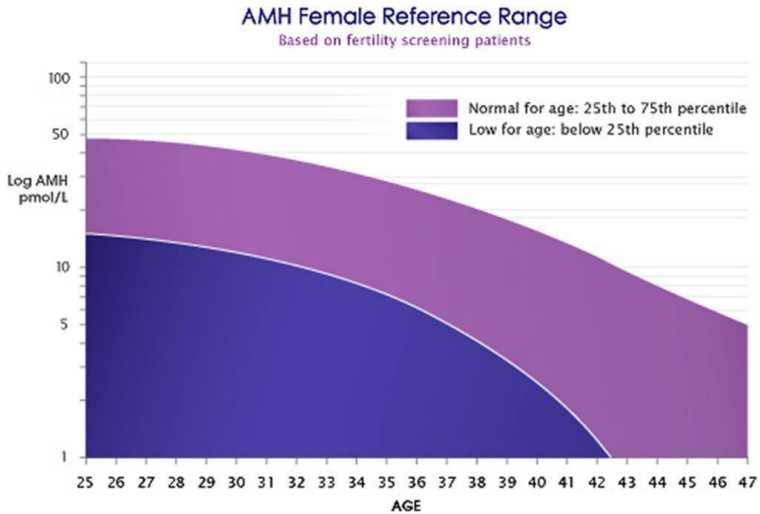
- No special preparation is required prior to the exam. You can take 600 mg of Advil 1-2 hours before the test if you have no allergy. This will minimize any cramps that may occur with this test.
- There is a very small chance of infection after the procedure. If you develop pain in the abdomen or fever after the first day, make sure you contact your doctor or one of his staff. In this case you need antibiotics for one week. If your doctor cannot be reached for any reason, make sure you see your family doctor or a walk -in clinic to have antibiotics prescribed.
- You may also call the **emergency pager between 3:00pm and 8:00pm at 289-242-1540**

Common indications for Sonohysterography



Step 3: Anti-Mullerian Hormone (AMH) Test

AMH or anti-Mullerian hormone is a substance that is produced by ovarian follicles which contain the eggs. It is a test used to predict ovarian reserve, or remaining egg supply. Women with higher AMH values will tend to have better response to ovarian stimulation for IVF and have more eggs retrieved.

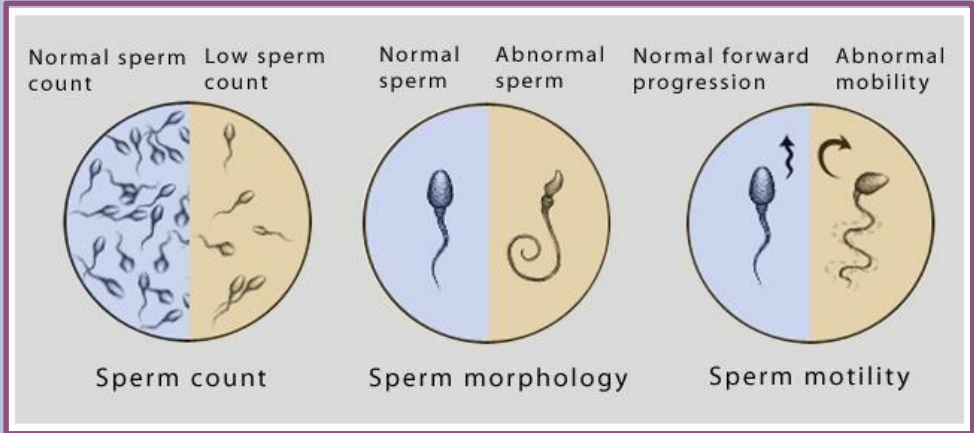


AMH declines with age and corresponds to the number and quality of the eggs.

AMH test is not covered by OHIP. It costs \$96.

Step 4: Sperm Testing

A detailed Strict sperm morphology is required for patients with a male partner. This test is not available in outside laboratories.



- During a semen analysis, the semen sample is analyzed for volume, viscosity (thickness), pH and color of the ejaculate, sperm concentration, motility, morphology, and forward progression of the sperm. The sample is also examined for the presence of white or red blood cells which may indicate infection or inflammation
- This test is best done after 2 to 5 days of abstinence. You must get the sample to the laboratory within 60 minutes after it is provided. You may provide your sample at home. It has to be kept at body temperature.
- Book and appointment to drop off the sample. Keep the sample at body temperature at all times. **Sperm Testing fee is \$150.**

Additional Testing

- Advanced male tests include: Sperm antibodies, Sperm DNA Fragmentation Test, Oxidation Reduction Potential (ORP). Discuss these tests with your doctor to see if you need any specialized tests.
- These tests are not covered by OHIP, ask about the costs at the reception desk.

Step 5: Review Appointment

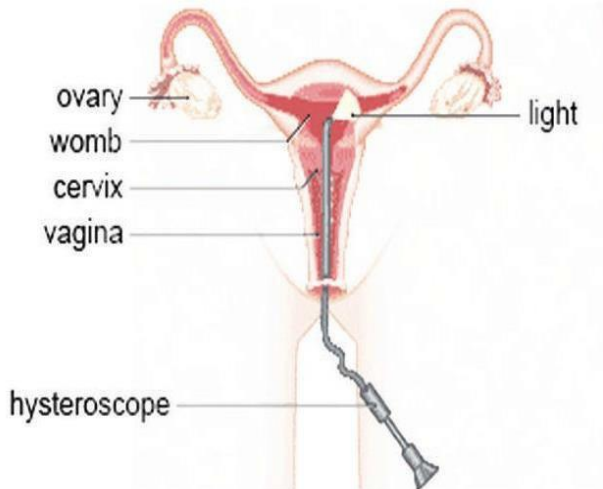
- You will be asked to book a review with your doctor after day 21 and before your next period. Make sure you have done your dye test/sono and your partner has done his semen analysis before the review.
- At the review we will decide what to do next. Please make sure you inform our reception of any tests done in another location so that the tests are retrieved before this appointment.

In **80%** of cases, an obvious cause of infertility can be found by these simple tests. In **20%** of cases, further testing is needed. This may include: laparoscopy, endometrial biopsy, hysteroscopy, specialized sperm testing, antibody testing, coagulopathy tests and chromosome analysis.

Hysteroscopy

Hysteroscopy is a surgical procedure, performed by placing a special telescope through the vagina into the uterine cavity to see and remove polyps, fibroids or a septum from the cavity of the uterus.

- Sometimes office hysteroscopy can be done instead of having a general anesthetic at the hospital; this is useful to visualize and remove small polyps.
- The procedure usually takes about 5 to 10 minutes.



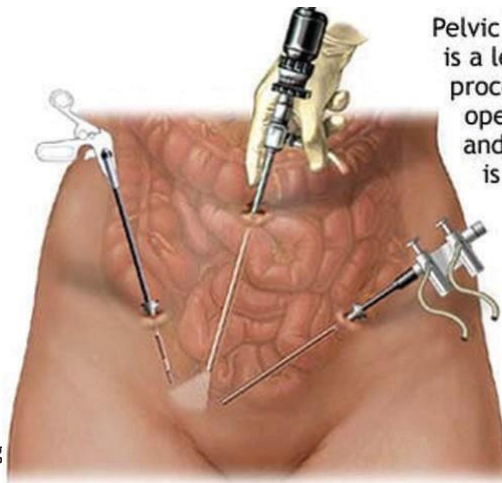
What to Expect

- Expect some discomfort and cramping afterward, also some spotting.
- You can take 600 mg of Advil 1-2 hours before the test if you have no allergy. This will minimize any cramps that may occur with this test.
- There is a very small chance of infection from the test. If you develop pain in the abdomen or fever after the first day make sure you contact your doctor or one of his staff.

Laparoscopy

A surgical procedure done to find and treat endometriosis, adhesions, organ malformations, and cysts.

- General anesthesia is used for this procedure. A scope is inserted through a small incision inside the navel or just below it to view the outside of the uterus, ovaries and fallopian tubes.



Pelvic laparoscopy is a less-invasive procedure than open surgery and recovery is quicker

- Often a second incision instrument is inserted to get different angles.
- If found, endometriosis and adhesions may be removed during this surgery.

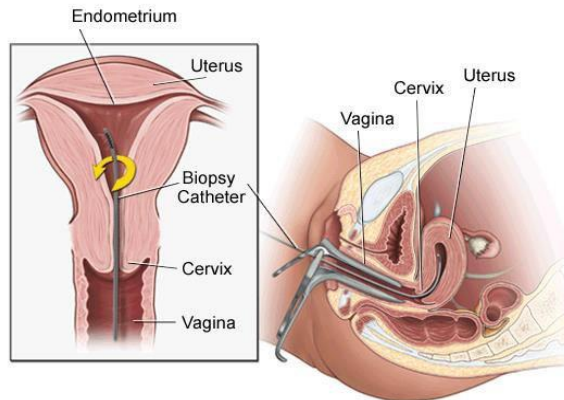
What to Expect

- Expect some pain and cramping, some shoulder pain from the gas, perhaps some nausea from the anesthesia, and some spotting.
- This is a same day surgery and you need 2 to 3 days recuperation. Your physician will discuss pain control with you.
- Please refer to the website (www.acog.org) for more information, risks and potential complications on laparoscopy.

Endometrial Biopsy

Endometrial Biopsy is a procedure which a tissue sample is taken from the lining of the uterus (endometrium) through a catheter, and is checked under a microscope.

Usually done on day 19 to 23 or a week after ovulation. This is also done before IVF.



What to Expect

- There is no special preparation for the biopsy. You may want to take Ibuprofen (Advil, Motrin IB) or acetaminophen (Tylenol) 1 hour before the procedure to reduce cramping.
- You may feel some pain when the cervix is grasped. You may have some cramping as the instrument enters the uterus and the sample is collected.

Infertility Treatment Options

	Ovulation Induction (OI)	Superovulation and Intrauterine Insemination (IUI)	In Vitro Fertilization (IVF)
Description	One or more Eggs. Oral Medication or Low dose gonadotropin.	One or more eggs. Oral Medication and/or low dose gonadotropin. Sperm wash and Timed Intercourse.	Multiple eggs. Higher dose gonadotropin. Oocyte retrieval. IVF or IVF with ICSI (Intra Cytoplasmic Sperm Injection). Embryo Transfer.
Success Rate < 40 > 40	<ul style="list-style-type: none"> • 8% • 4% 	<ul style="list-style-type: none"> • 15%-20% • 10% 	<ul style="list-style-type: none"> • 50%-60% • 25%-30%
Cost/Cycle	Oral Medication: \$40-\$100 Injections: \$300-1500	\$500-750 plus Medication Cost	• \$4800-9,000 plus, Medication

Other Options include:

- Surgery
- Donor Egg IVF
- Donor Sperm
- Donor Embryo

Ovulation Induction (OI)

Ovulation induction involves taking of medication to start or support ovulation, to assist couples to conceive naturally.

Oral medications: Clomid (Seropnene), Femara (Letrozole), Dexamethasone

These are medications that raise FSH (hormone that stimulates the ovaries). They are useful if your cycle is not regular, or ovulation is not optimal. They are used for: treatment of unexplained infertility, mild endometriosis, PCOS, and ovulation dysfunction.

Monitoring:

Cycle monitoring by blood work and ultrasound (similar to the investigative cycle) is needed to gauge the response to the medications and check the lining. Monitoring is also needed to identify ovulation and the best time for intercourse.

Side Effects:

- The main side effects are hot flashes, headaches, and moodiness. Twins occur in 10% of those that get pregnant.
- The downside is that sometimes they affect the lining adversely and, in this case, we do not use them again, otherwise it is reasonable to try them for 3 to 6 cycles.

HCG: Chorionic Human Gonadotropin, Ovidrel, Pregnyl

This may be used to trigger ovulation. It also helps with the lining support after ovulation. The doctor or nurse will advise you of when/ if these medications are needed.

Gonadotropin Injections: Puregon, Gonal F, Bravelle, HMG, Menopur, Repronex

They are FSH+/- LH hormone, which are the natural hormones that your body produces to stimulate the ovaries. They are used to increase the number of eggs you will produce in one cycle.

Usage

- They are taken by daily injections that you administer yourself.
- Your nurse will teach you how to inject these medications. Make sure you know how to inject and how much. Your dose may vary depending on response.
- You can also make an appointment with the nurse to go over the protocol, potential side effects and any questions you may have. This appointment takes ½ hour and it is dedicated to injection discussion.

When to Take Them

- Usually the injections start on day 2 –5 of the cycle.
- Sometimes when used in combination with oral agents they start on day 5 to 7. Close monitoring is always necessary.
- If you are on gonadotropins, book your ultrasound and do the blood tests on day 3, 6, 8,10, 12.

Side Effects

The main side effects are headaches, fatigue, multiple pregnancy and ovarian hyperstimulation.

Associated Costs

- Check with your own insurance on your coverage because these medications are expensive. Average cost per cycle is \$600 to \$2000.
- Do not stop your medication without being told by the nurse or doctor.

Make sure you do not run out of medications. They are not easily found in outside pharmacies. Purchase these meds from the clinic on day 3 of your cycle; you should buy enough for 4 days.

Other Drugs: Metformin, and Glumetza

These are useful for PCO patients (patients who do not ovulate). They lower the insulin level and help ovulation with or without other medication. They also have a role to play in decreasing miscarriages in PCO patients.

Side Effect

The main side effect of metformin is nausea. if this is bothersome, take 1 tablet daily for one week to get used to it, then increase dosage to 2 tablets per day.

Duration

- They are taken continuously until 7 weeks of pregnancy.
- They take at least 4 to 6 weeks to reach maximum effectiveness, and the dose may have to be increased.

Progesterone Suppositories

Progesterone is a natural hormone that supports the lining until pregnancy occurs and the placenta is able to produce its own Progesterone.

Usage

- Peel the plastic wrapper and insert the suppository in the vagina or the Use 1 to 3 times (as instructed) daily. Do not stop if you are spotting unless the pregnancy test is negative. If you are pregnant, continue until you are 10 weeks pregnant.
- If used vaginally, wear a panty liner because there is some discharge with the suppositories. There is less irritation with the rectal route.
- If you develop a reaction, inform the nurse.

Precaution

Do not leave the suppositories in a hot place or in the sun, they will melt.

Important to Remember

Make sure you have a **telephone number or email** where we can contact you during the day. It is your responsibility to answer that telephone or make sure you listen to our message **before taking your medications** and follow our directions **accurately**. Failing to do so will result in possible serious complications and possible cancellation of your cycle.

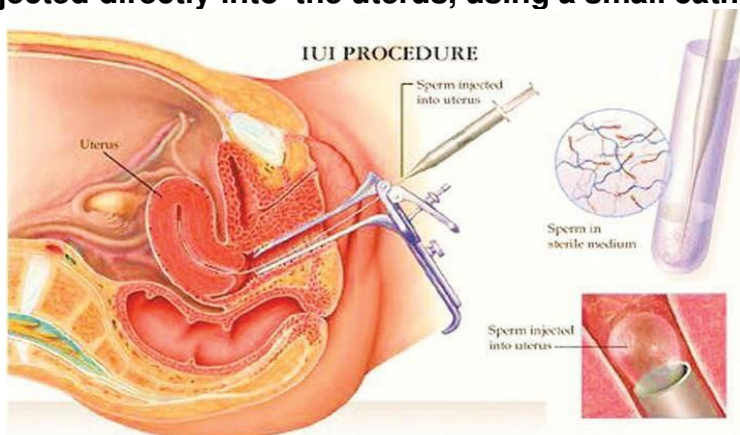
Superovulation(SO)and Intrauterine Insemination(IUI)

Superovulation/IUI is a fertility treatment that involves taking medications to produce eggs and having an insemination when the eggs are released.

Intrauterine Insemination (also called IUI and sperm washes) involves placing specially treated or “washed” sperm directly into a woman’s

- Intrauterine insemination can be stimulated (fertility drugs can be used to produce more than one egg), or unstimulated within a woman’s natural menstrual cycle.
- Sperm can be from a woman’s partner or, if appropriate, from a donor.

The sperm is first washed in a sterile instrument. The sperm is then concentrated in a small volume of medium and is injected directly into the uterus, using a small catheter.



- The sperm wash takes 45 mins to 1 hour. The insemination takes 2 minutes. It feels similar to a pap test.
- Pain after IUI is usually because of ovulation but if you experience severe pain or fever contact the clinic or call the pager ASAP. You may experience slight spotting after the IUI; this is normal.

Precautions: Avoid heavy exercise after IUI for 2 days.

In-vitro fertilization (IVF)

This is the most effective fertility treatment. It is used for blocked or damaged fallopian tubes, cases of severe endometriosis and in almost all causes of infertility when other treatments have failed. Also, it may be the best way to go if you do not have drug coverage because the cost of doing 3 cycles of injections and IUI would be close to doing one IVF cycle.

For more information about IVF, see the NewLife Fertility In Vitro Fertilization (IVF) Procedure booklet and the following websites:

www.newlifefertility.com

www.acog.org

www.asrm.org

www.cfas.ca

www.myfertility.ca



NEWLIFE
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Information Guide In Vitro Fertilization (IVF) Procedure

Guide for patients considering undergoing In Vitro Fertilization

www.newlifefertility.com

The process takes two cycles to start, from the time a patient decides to go ahead with IVF.

Basic steps done prior to the IVF Procedure



Step 1

Initial Consultation with your Doctor

An initial consultation with the doctor is scheduled to discuss the plan of treatment, the chances of success and related costs.



Step 2

Conducting Required Tests

These tests include: Semen Analysis for the male partner, Investigative Cycle (including hormone tests and ultrasounds), Endometrial Biopsy, SHG/HSG/Hysteroscopy and Mycoplasma swab.

In addition, both partners need to do screening test for infectious disease if they haven't within 6 months of the start of the IVF cycle.



Step 3

Consultation with a New Life Nurse

The nurse will discuss your history, review consents forms, sign fee agreement, medications schedule, and take you through the steps of the procedure. (Please bring a translator if you cannot understand English. It is essential to understand every step of the process and follow instructions carefully).



Step 4

Consultation with a Fertility Counsellor

A meeting with our counsellor will be held to discuss family issues, coping skills and give you an idea of what to expect during your procedure. This meeting helps to relieve your anxiety and to put a perspective on treatment outcome.

Ovarian Stimulation IVF Protocols

Importance of the number of eggs retrieved

In order to maximize success rates with IVF, a good number of high-quality eggs are needed. We use medication to grow as many eggs as possible in a safely manner. We aim to grow one to 15 eggs on the average.

Stimulation

There are several ovarian stimulation medication protocols that are used to "pump up" the ovaries to make enough follicles and eggs. Without stimulating medications, the ovaries make and release only 1 mature egg per menstrual cycle (month).

About HCG

When is it required: When the follicles are ready (at least 4 large follicles) you will be given a specific time to administer your trigger medication (HCG, Suprefact, Ovidrel) This timing is very important.

Dosage and Administration: The nurse will inform you of exactly when it is needed.

Timing of the trigger medication is crucial. Retrieval of the eggs is done 36 hours after HCG.

Take Doxycycline on the night before retrieval and continue after for 4 days. Make sure you have all of your prescriptions before your procedure. Ask the nurse if you need assistance or clarification.

In-vitro fertilization (IVF)

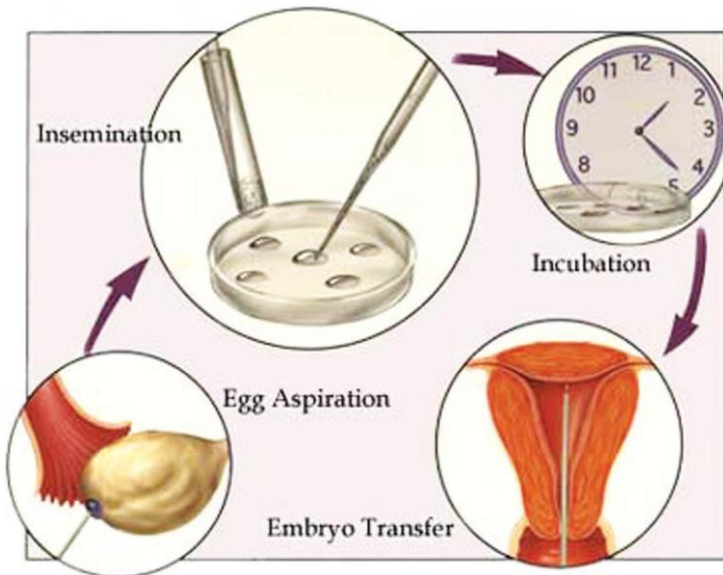


In Vitro Fertilization, commonly referred to as IVF, is the process by which eggs are removed from your ovaries and mixed with sperms in a laboratory culture dish. Fertilization takes place in this dish.

IVF is a four-stage procedure:

Stage One

Hormonal injections are given to stimulate the development of multiple follicles (eggs).



Stage Two

Once mature, the eggs are removed (or retrieved) from the woman's ovaries using a fine needle.

Stage Three

The eggs are transferred to a laboratory dish where they are fertilized by sperm collected from the male or donor partner.

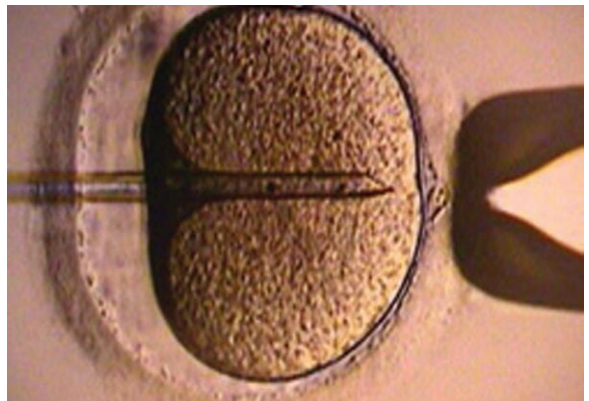
Stage Four

Several days later, the fertilized embryo is inserted back into the uterus if doing a fresh transfer cycle. Alternatively, the resulting embryos are frozen and transferred later in a frozen transfer cycle (FET).

Intra Cytoplasmic Sperm Injection (ICSI)

This is a method of IVF aims at achieving fertilization by direct injection of a single sperm into each egg.

Under a microscope, a single live sperm is injected into the centre of the egg. This carries the sperm through the protective coverings of the egg, which it could not pass on its own.

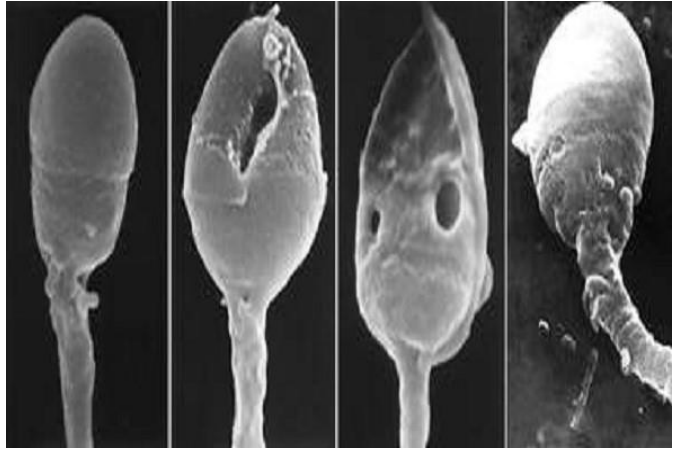


ICSI - an egg (centre) about to be injected with a single sperm, the dot seen in the needle (left).

Intra Cytoplasmic Morphologically Selected Sperm Injection

IMSI uses a high magnification light microscopy imaging method to select sperm for ICSI.

IMSI is a real-time method where sperms are selected before the microinjection takes place. This is done using an



Electron microscope image of sperm: picture 2 and picture 3 show structural defects in sperm head.

inverted microscope that is able to provide a much greater magnifying power.

Defects in the sperm can be detected using this technique. It gives better embryo quality and more blastocysts, which allows more embryo transfers at blastocyst stage.

Protocol Medication Chart

Protocol	Short	Long
Used For	Normal Response	Normal Response
Medication	<p>Gonadotropin: Starts day 3 of your cycle, or when told by the Nurse.</p> <p>Cetrotide / Repronex 75: Start when the largest follicle reaches 1.3cm, or when told by the nurse.</p>	<p>Lupron/Suprefact: Start on day 21 of cycle before IVF.</p> <p>Gonadatropin: Start on day 3 of your cycle, or when told by the nurse.</p>

Instructions Do not stop either medication at any time unless told by the nurse.

Administration	<p>Gonadotropin: Take the injections after 5 PM.</p> <p>Cetrotide: Start on day 6 or 7 of cycle and will continue until ovulation is triggered or when the largest follicle reaches 1.4mm.</p> <p>Both can be taken at the same time</p>	<p>Lupron: 0.1mL is started on day 21 and decrease to 0.05mL when told by the nurse.</p> <p>Superfact: 0.2ml is started on day 21 until HCG is administered.</p> <p>Gonadatropin: Take the injections after 5 PM. Treatment lasts for 10- 14 days.</p>
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Medication used in all IVF protocols

Gonadotropins and HCG are administered in all IVF Protocols Dosage will vary according to Doctor's recommendation and requirements. **Do not stop any medication unless told by the nurse. Do not run out of medication.**

Flare/Microflare	Mini	Natural
Diminished	Diminished Response	Diminished Response
Gonadotropin: Start on day 3 of the cycle	Femara 5mg /Clomid 100: Start on day 3-7 of cycle. Gonadotropin with Cetrotide: Start on day 7 (last day of Clomid)	No medication is required until the largest follicle reaches 14mm. Repronex / HMG and Cetrotide: Start when the largest follicle reaches 14mm or when told by the nurse.

Do not stop medication at any time unless told by the nurse.

Gonadotropin: Take 0.05ml dose of Lupron with the prescribed gonadotropin.	Femara 5mg /Clomid 100: Medication is taken once, daily. Gonadotropin with Cetrotide: Start on day 6 or 7 of cycle and will continue until ovulation is triggered or when the largest follicle reaches 1.4mm.	Repronex / HMG and Cetrotide: Usage will continue until ovulation is triggered.
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Important to Remember

- Follow medication storage instruction. Make sure **you do not run out of your medication.**
- Blood test and Ultrasound: Call on day 1 of your cycle and book an ultrasound (US) and blood test on day 3.
- The nurse will teach you how to administer the medication.
- Do not stop either medication at any time unless told by the nurse.
- Gonadotropin injections (Puregon, Gonal F, Repronex, Menopur, Rekoville): Take your injections after 5 PM to give us time to communicate any adjustment to you.
- Please make sure we have a telephone number with an active voicemail, or an email if you prefer, where you can be reached. **If we are unable to reach you, your treatment may be compromised or cancelled.**

Egg Retrieval

Your doctor will use vaginal ultrasound to monitor the development of fluid-filled ovarian cysts where eggs mature (follicles). Blood tests also will be used to measure your response to ovarian-stimulation medications. Estrogen levels typically increase as follicles develop and progesterone levels remain low until after ovulation.

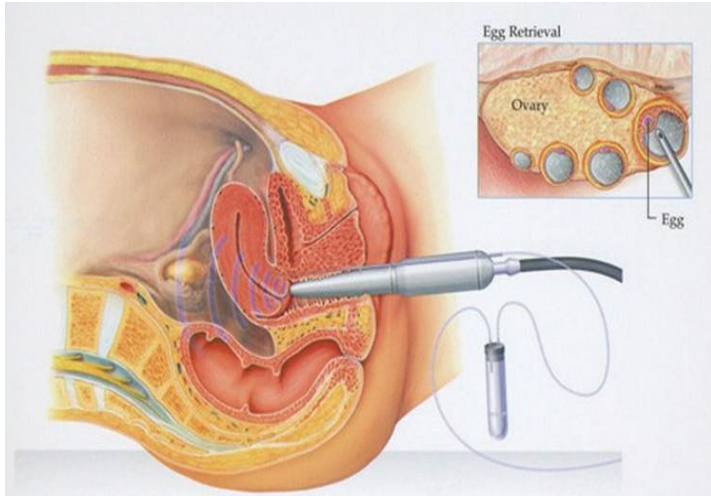
Using ultrasound to view the ovary, the physician inserts the needle through the wall of the vagina into the ovary and retrieves the egg for use in IVF.

Pre-procedure Requirements

- You are to have nothing to eat or drink after midnight, on the night before your procedure.
- You will be asked to come in one hour before your procedure.
- Please leave your jewelry at home and remove your nail polish. Wear comfortable clothes and shoes.
- You will have an IV started and will be given medications to make you sleepy. You should not feel any pain.

About the procedure

- The retrieval is done with an ultrasound and a needle inserted into the vagina. The vagina is cleaned and you are given a local anesthetic that is used in the dentist office.
- The eggs are retrieved using a needle. The fluid is examined under a microscope and the eggs are collected.
- The washed sperm is mixed with the eggs and left to mature. If using ICSI, the eggs are injected with sperm under the microscope.



Post Procedure Care

- After the procedure, you may feel mild cramps. You are observed by the nurse and discharged when you feel ready. Plan to be at the clinic for approximately 3 hours.
- You cannot drive yourself that day.
- You may have a small amount of bleeding and nausea.
- Call the clinic if you have any questions or concerns. Our after-hours number is **289-242-1540**.

Medication: In case you are doing a fresh transfer in the same cycle

- Start progesterone suppository twice per day, Prometrium 100 mg in the morning and afternoon and 300mg at night, Aspirin 81 mg once daily and prednisone 10 mg day of retrieval. Continue with Progesterone until you are told by the nurse to stop or you reach 10 weeks of pregnancy. This is when the placenta takes over Progesterone production.
- Start Estrace 2mg, 3 times daily, for 4 days after your retrieval.
- The nurse will inform you of any other medications you may need.

Progress Report

The embryologist will communicate with you on the status of your embryos from fertilization to development, the next day after retrieval and on day 3.

Egg Freezing

Shortly after your unfertilized eggs are retrieved, they're cooled to subzero temperatures to stop all biological activity and preserve them for future use.

Oocyte cryopreservation or egg freezing is aimed at three particular groups of women:

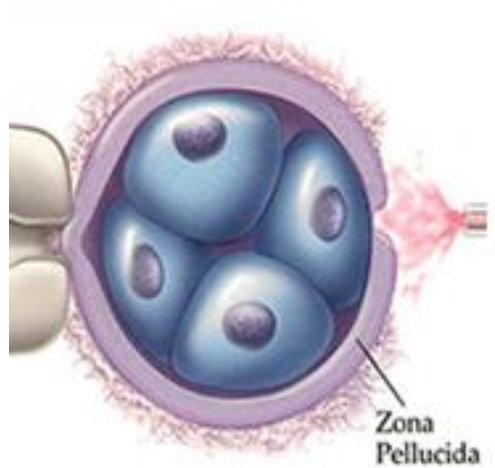
- those diagnosed with cancer who have not yet begun chemotherapy or radiotherapy;
- those undergoing treatment with assisted reproductive technologies who do not consider embryo freezing an option;
- and those who would like to preserve their future ability to have children, either because they do not yet have a partner, or for other personal or medical reasons.



The egg retrieval process for egg freezing includes one to several weeks of hormone injections that stimulate ovaries to ripen multiple eggs. When the eggs are mature, final maturation induction is performed. The eggs are subsequently removed from the body by transvaginal egg retrieval. The eggs are immediately frozen.

Assisted Hatching

- Assisted hatching is recommended for women over 39 years of age, with embryo transfer on day 3.
- It is performed in order to help an embryo hatch out of its protective shell (called a zona pellucida) and implant into the uterus.
- It is performed using micro manipulation techniques, and laser, before embryo transfer.
- If this procedure is required, it will be discussed with you on the day of embryo transfer.



Who can use Assisted Hatching?

Assisted hatching techniques aren't suitable for every couple. Instead, the procedure is typically recommended for:

- Women over the age of 39.
- Women with embryo quality and number issues.
- Women with elevated FSH on day 3 of their menstrual cycle.
- Couples who have experienced failed IVF cycles.
- Women with thick zona pellucida (egg shell).

For more details, please ask the embryologist about this procedure at your meeting.

Your IVF Journey



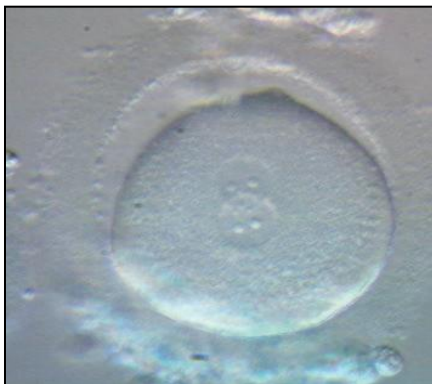
Day 0: The day of retrieval and insemination.

Day 0: Retrieval

You will have a number of eggs retrieved; the matured eggs will be inseminated with regular method of sperm egg co-incubation or ICSI (intra-cytoplasmic sperm injection) or IMSI

(Intracytoplasmic Morphological Sperm Injection)

The procedure is minimally invasive and usually takes about 10 minutes. You are advised to do the following: take a day off from work, arrange for your ride home, check in an hour early and plan to stay for approximately 2 hours.



Day 1: Number of successfully fertilized eggs

Day 1: Determining the number of successfully fertilized eggs

On the morning of Day 1, we will determine how many eggs are successfully fertilized.

Our embryologist will send you an email in the morning to inform you as to how many eggs have been successfully fertilized.

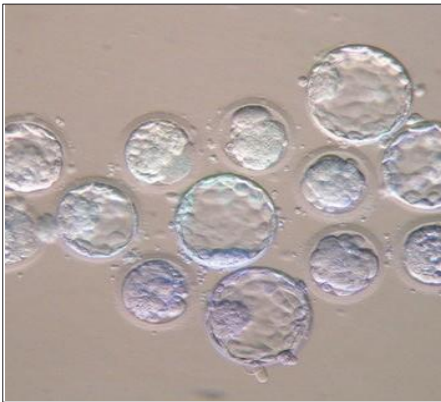
Your IVF Journey



Day 3-4:
Embryo Culturing

Day 3-4: Embryo culturing

If you have a Day 3 embryo transfer, the embryos will not be cultured further. The good quality embryos will be transferred in the morning of Day 3 culture. If you have a Day 5 embryo transfer, your embryos will be cultured further in the incubator. During these two days, your embryos will not be disturbed.



Day 5: Fresh Day 5
Transfer

Day 5: Fresh Day 5 Transfer

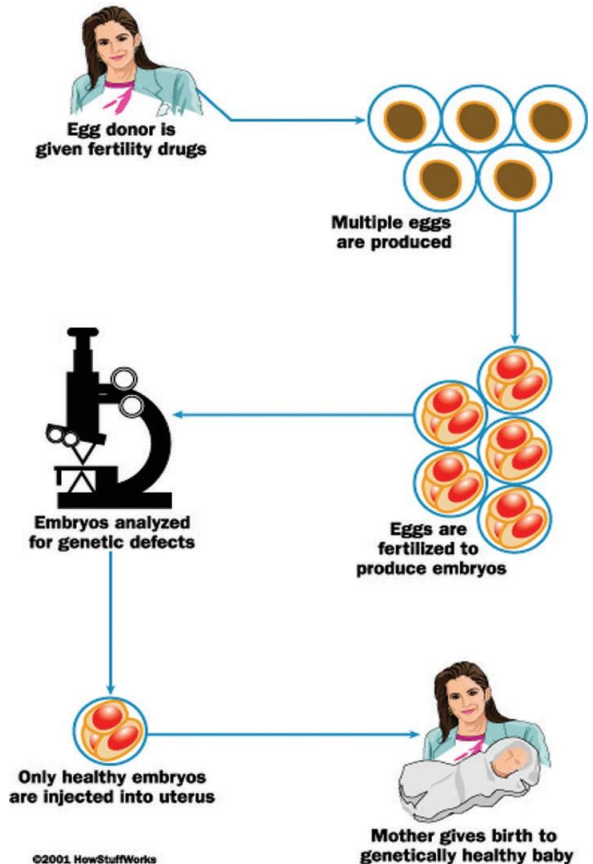
On the morning of day 5, we will examine your embryo development. The embryo quality will be graded. A detailed report will be available for your doctor. If you are scheduled for a fresh Day 5 transfer, your doctor will explain to you that morning about your embryo development before the embryo transfer procedure.

If you will not have a fresh transfer or your fresh cycle is cancelled, the embryologist will send you an email to let you know about the embryo quality and number of embryos that will be frozen.

Preimplantation Genetic Screening (PGT-A)

Preimplantation Genetic Screening is done when cells are removed from the Day 5 embryo after IVF and all 24 chromosomes are checked and analyzed for abnormalities.

- It is a technique used to identify genetic defects in embryos created through in vitro fertilization (IVF) before transfer.
- It is especially helpful when one or both genetic parents have a known genetic abnormality and testing performed on an embryo to determine if it also carries a genetic abnormality.
- It allows us to diagnose single gene defects such as haemophilia and Huntington's disease.
- The test helps to select the normal embryos to transfer back to the uterus
- This is done only during IVF/ICSI cycles. OPGDF is an attractive means of preventing heritable genetic disease, thereby eliminating the dilemma of pregnancy termination following unfavorable prenatal diagnosis



Donor Egg IVF

Some patients with diminished ovarian reserve, multiple failures with IVF, recurrent pregnancy loss, or poor response to gonadotropins, require the donation of eggs or embryos to conceive. Eggs and embryos can come from known or anonymous donors. The nurse can discuss your options with you.

- **Donor egg IVF means that the eggs come from another woman and the embryos are transferred to your uterus.**
- The cycle is initiated after you and your donor's "baseline" blood work and sonogram.
- Egg retrieval takes place approximately 10-14 days after cycle initiation.
- Embryo transfer will happen 3-5 days later, and a pregnancy test will be done 7-10 days after embryo transfer. In case of Frozen Embryo Transfer, the embryos will be frozen and transferred to the recipient in a future cycle



Frozen Embryo Transfer

Frozen Embryo Transfer or FET has been shown to improve IVF outcome before the embryo is transferred in a cycle without medications.

Natural cycle:

If your cycle is regular, it is common to transfer the embryos in a natural cycle.

- This is done by monitoring your ovulation on day 3, 10 and 12 until you have an LH surge or we will give you HCG.
- You then start on Progesterone suppositories and Prometrium as instructed by your nurse.
- The embryos are transferred on the 6th day of Progesterone, in case your embryos were frozen on day 5th day of growth after fertilization.

Medicated cycle:

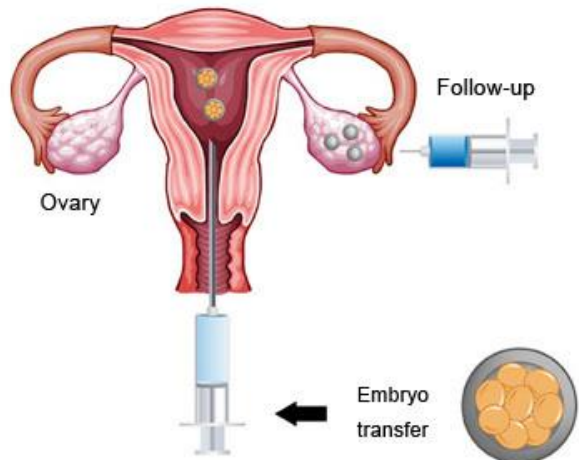
Is done when your cycle is not regular or is too short, or your lining is thin.

- Start on Estrogen (Estrace, Climera, Estradot, Vaginal Estrace) on day 3. Continue until you are 7 weeks pregnant.
- Start Progesterone when told by the nurse and continue until you are 10 weeks pregnant (if tablets) and 12 wks pregnant (if suppositories) .
- **The transferr is done afterr 3-6 days of being on Pprogesterone.**

Embryo Transfer

About the Procedure

- Transfer of the embryos is done under Ultra Sound guidance.
- The procedure is comfortable and does not require sedation (comparable to a pap smear).
- You are requested to have a full bladder so the uterus and transfer catheter may be visualized using ultrasound by an abdominal probe.
- The embryos are loaded into a fine catheter and passed though the cervix, into the uterus. Gentle pressure is applied to the catheter syringe and the embryos are released into the uterus.
- You will discuss the number of embryos to transfer with your physician in advance and sign a consent form.



Number of Embryos Transferred

The number of embryos transferred will be determined in order to maximize the opportunity for a singleton pregnancy. Several patient specific considerations determine this number including:

- Age of female partner: If less than 37 years, a single embryo transfer is recommended.
- Quality of embryos: If the quality of the embryos is less than optimal, then double embryo transfer is recommended.
- Number of embryos suitable for cryopreservation.
- Previous fertility history: If the patient has had a failed IVF cycle, double embryo transfer is recommended.
- Individual recommendations will be made

Pregnancy Test Requirements

You will be asked to come in for a pregnancy test after 7-10 days following embryo transfer. If you are pregnant, you may be asked to repeat the test in 2 days and book an ultrasound on 7 weeks of gestation. The nurse will inform you of the exact day to return.

Continue all medications unless you are told to stop by the doctor or nurse.

Precautions

Avoid heavy activity, exercise, and intercourse for one week after the embryo transfer. Yet, bed rest is not recommended.

Factors affecting IVF success rate

Success
with IVF is
dependent
on:

Female Age: this is the most important factor.

The quality of eggs and your embryos.

A team effort including nurses, doctors, lab personnel and you.

NewLife fertility Centre has amongst the highest pregnancy success rates in the country.

For NewLife Success Rates please visit:

www.newlifefertility.com/success-rates.html



Embryo Quality and Embryo Grading after the IVF Procedure

Day 3 Embryo Grading: 8 Cell Stage



Perfect embryo at day 3 with uniform size of cells.



Good quality embryo at day 3 with a few fragments of cytoplasm.



Poor quality embryo at day 3 with mostly fragmented cells.

Day 5 Embryo Grading: 8 Cell Stage



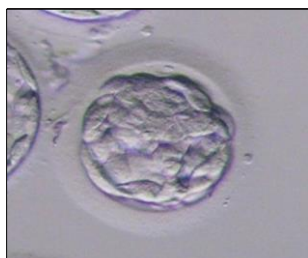
Perfect embryo at day 5, with a full size cavity.



Very good quality of embryo at day 5, with a mid size cavity.



Very good quality of embryo at day 5, with a small size cavity.



Good quality day 5 embryo, starting cavitation.



Poor quality day 5 embryo with degrading cells.

What is Blastocyst Transfer?

Blastocyst Transfer is a recent breakthrough in IVF technology. In standard IVF, embryos are transferred to the womb when they reach the two- to eight-cell stage. In the newer procedure, the embryos are allowed to grow for five days until they reach the blastocyst stage. The healthiest one or two blastocysts are chosen for transfer. This eliminates the possibility of triplets while maintaining a high success rate.

IVF Package Options at NewLife Fertility

Multiple-Cycle Packages

We offer two and three cycle package that is financially attractive for some patients who may need more than one cycle to conceive.

Guaranteed Success Program

At NewLife Fertility, we believe in success. Our **Guaranteed Success** Plan is based on the principle of mutual commitment. We are so confident in our ability to deliver, that we back our commitment with a **Money Back Guarantee**: we will refund **70%** of our professional fees, if the treatment does not result in a viable pregnancy. To be eligible for this program, certain conditions have to be met.

Please inquire about either option when you meet the nurse.

The **NewLife Embryology Laboratory** looks forward to working with you over the next 3 to 5 days of your IVF procedure, and we will do our best to ensure your comfort and ease.

Should you have any questions concerning the status of your embryo development following egg retrieval procedure, please feel free to contact the embryologist at **905-896-7100 ext 140**





NEWLIFE

FERTILITY CENTRE

Mission

To provide patient-centered, effective, safe, and innovative reproductive care

Vision

To help people fulfill their dreams of a healthy family

We hold the following values to guide our decision making:
Safety, Respect and Compassion, Equity, Transparency, and Integrity

Clinic Locations

Mississauga Centre
4250 Sherwoodtowne
Blvd. Mississauga,
ON, L4Z 2G6

Brampton Centre
2 Dewside,
Unit 210, Brampton,
ON L6R 3Y5

Milton Centre
470 Bronte St. South,
Unit 200, Milton,
ON L9T 2X6

Richmond Hill Centre
670 Highway 7 East,
Unit 8 Richmond Hill,
ON L4B 3P2

Concord Centre
8760 Jane St., Building C,
Concord, ON L4L 2Z3

Scarborough Centre
1585 Markham Rd,
Scarborough, ON M1B 2W1

Burlington Centre
418 Plains Rd. E
Burlington, ON L7T 2C8

Pager in case of Medical EMERGENCY Only: 289-242-1540 will be answered from 4:00 pm to 8:00 pm

newlifefertility.com

Where Life Begins