



NEWLIFE
FERTILITY CENTRE



Information Guide

Infertility Investigation & Treatment

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



www.newlifefertility.com

The Facts on Infertility

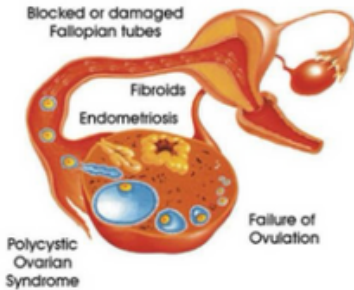
Infertility is defined as the inability to become pregnant after 12 months of unprotected intercourse.

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 is unable to achieve a pregnancy naturally and suffer from sub-fertility.

Causes of Infertility

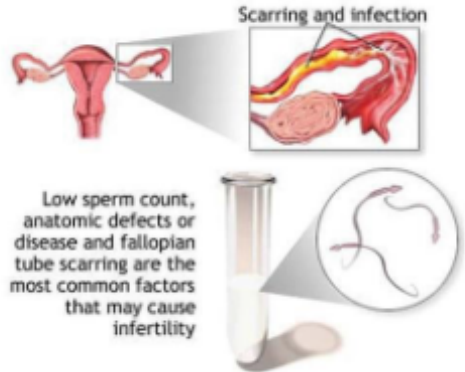
Female Factor:

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



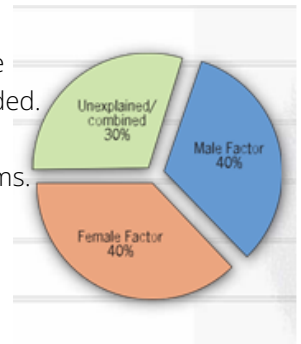
Male Factor:

DNA damage, low sperm count or motility, and 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

Investigative 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 6 steps:

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

Step 1: Cycle Monitoring

Day 1 is the first day of menstrual bleeding (not spotting).

Email or message on Portal on Day 1 to book bloodwork and US appointments for cycles on Days 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.

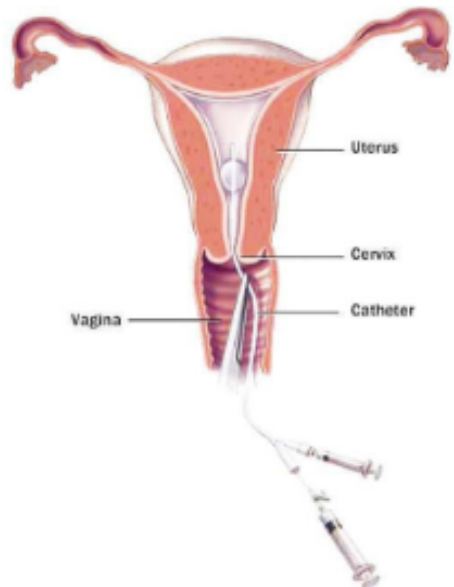
It provides pictures of the inside of your uterus to check the lining and to see if the fallopian tubes are open.



Hysterosalpingogram or Dye Test

An HSG (hysterosalpingogram) 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.

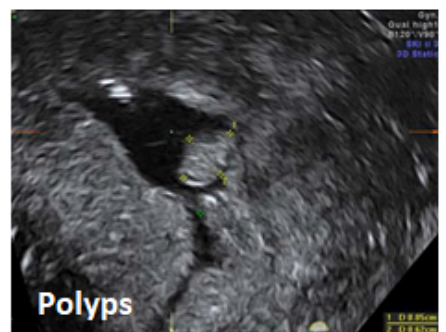
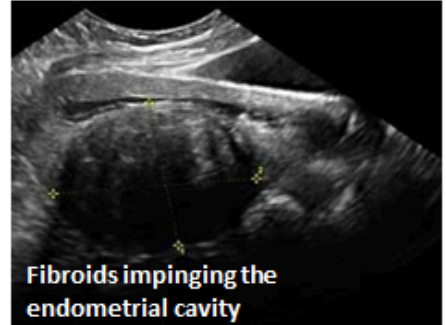
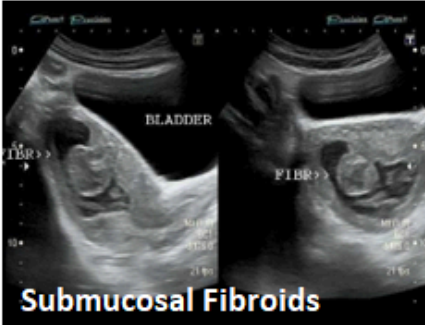
- The HSG test is a radiology procedure performed by your physician.
- Radiographic contrast (dye) is injected into the uterine cavity through the vagina and cervix. The uterine cavity fills with dye and if the fallopian tubes are open, dye fills the tubes and spills into the abdominal cavity.
- Dye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



What to Expect with Sonohysterogram (SONO) and Dye Test

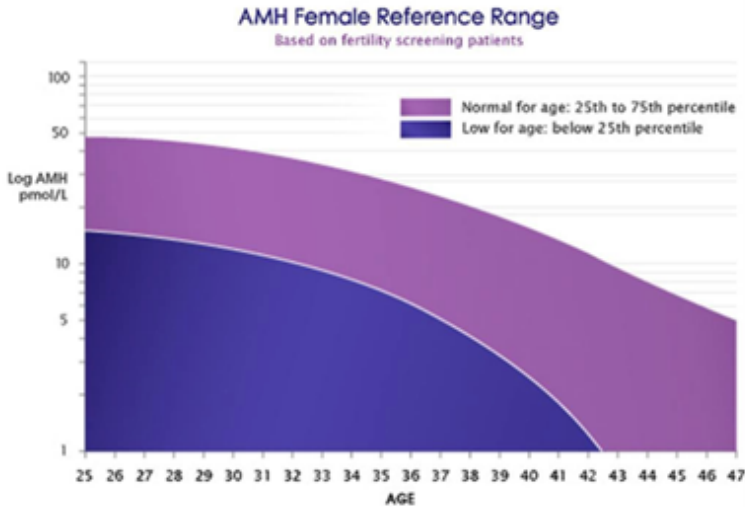
- No special preparation is required before the exam. You can take 600 mg of Advil 1-2 hours before the test if you have no allergy. This will minimize any cramps that may occur with this test.
- There is a very small chance of infection after the procedure. If you develop pain in the abdomen or fever 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 3:00 pm and 8:00 pm 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.

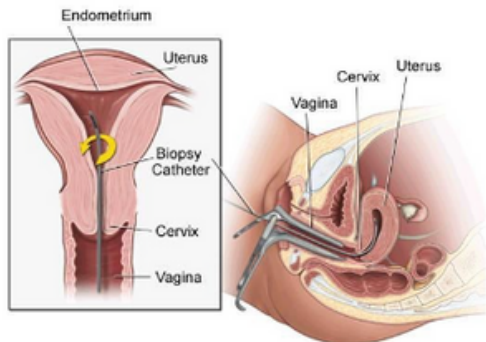
AMH test is not covered by OHIP.

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.



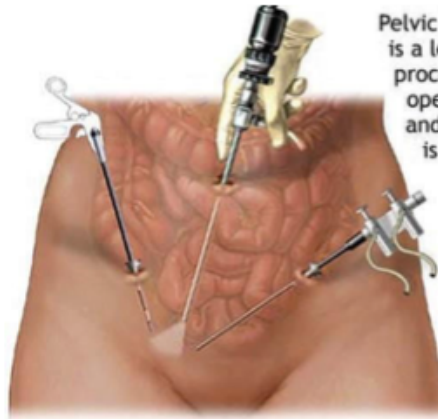
what to Expect ?

- There is no special preparation for the biopsy. You may want to take 600 mg of Ibuprofen (Advil, Motrin IB) or acetaminophen (Tylenol) 1000 mg 1 hour before the procedure to reduce cramping.
- You may have some cramping as the instrument enters the uterus and the sample is collected.

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 is made just below the pubic hairline through which an instrument is inserted to gently manipulate the organs to allow the scope to examine different angles.
- If found, endometriosis and adhesions may be removed during this surgery.

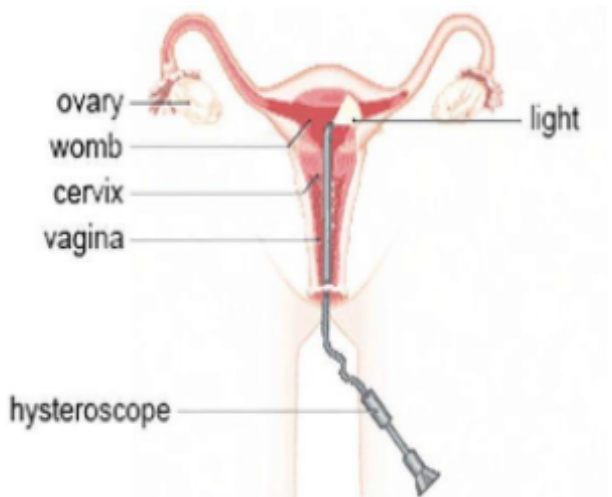
What to Expect ?

- 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 of recuperation. Your physician will discuss pain control with you.
- Please refer to the website (www.acog.org) for more information, risks, and potential complications of laparoscopy.

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.

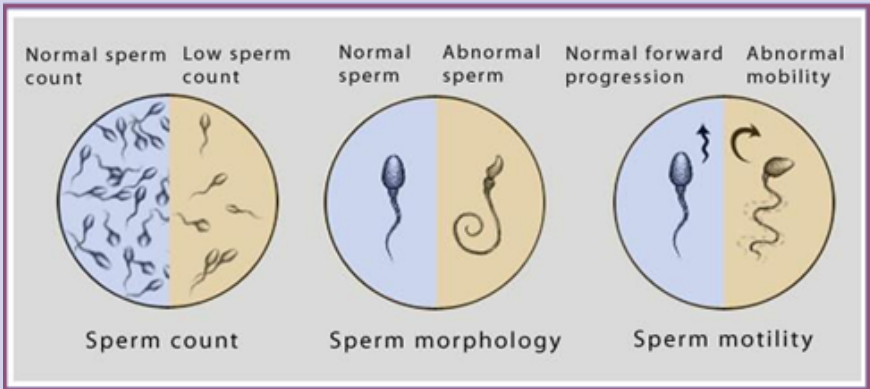


What to Expect ?

- 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.

Step 5: 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 an appointment to drop off the sample. Keep the sample at body temperature at all times.
- There is a charge the Semen Analysis.

Sperm DNA Fragmentation

- 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.

Step 6: 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 the 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, Immunological testing, and chromosome analysis.



Infertility Treatment Options

	Ovulation Induction (OI)	Superovulation and Intrauterine Insemination (IUI)	In Vitro Fertilization (IVI)
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	<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 %
< 40			
> 40			

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 (the hormone that stimulates the ovaries). They are useful if your cycle is irregular or ovulation is not optimal. They are used for : the 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 who 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 of 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 your 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 days 5 to 7. Close monitoring is always necessary.
- If you are on gonadotropins, book your ultrasound and do the blood tests on days 3, 6, 8,10, and 12.

Side Effects

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

Associated Costs

- Check with your own insurance on your coverage for these medications' cost.
- 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 medications 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 with 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 the 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 can 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 e-mail** 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.

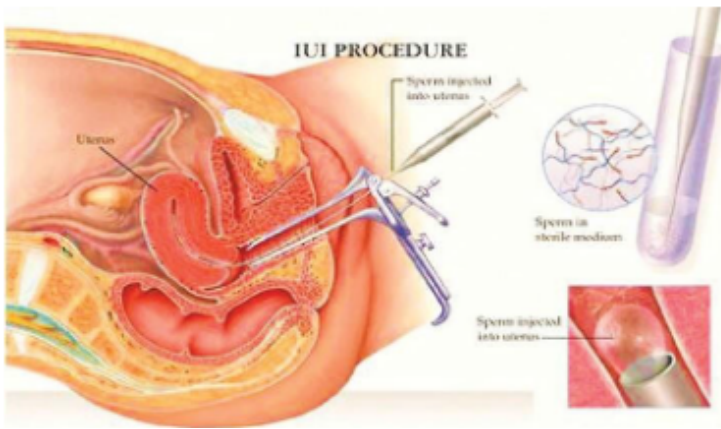
Superovulation (SO) and Intrauterine Insemination (IUI)

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

FERTILITY CENTRE

Mission

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

Vision

To help people fulfill their dreams of a healthy family

10 Locations in the GTA

Mississauga Centre

4250 Sherwoodtowne Blvd.
ON, L4Z 2G6

Richmond Hill Centre

670 Highway 7 East – Unit 8,
ON, L4B 3P2

Hamilton Centre

1057 Main St W,
ON L8S 1B7

Scarborough Centre

1585 Markham Rd Unit 301
ON M1B 2W1

Brampton Centre

2 Dewside Dr. – Unit 210
ON, L6R 3Y5

Milton Centre

470 Bronte St. South
Unit 201, ON, L9T 2X6

Concord Centre

8760 Jane St, Unit 101
Building A, ON L4K 4V3

Toronto Centre

139 Lower Jarvis St,
ON M5E 1Z6

Burlington Centre

418 Plains Rd East,
ON, L7T 2C8

Oakville Centre

B6-1235 Trafalgar Rd.
ON L6H 3P1



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