



Tripler Army Medical Center Assisted Reproduction Program

Tripler Army Medical Center

Reproductive Endocrinology & Infertility



Patient Information:

The treatment of infertility is not covered by TRICARE Insurance; however, Tripler Army Medical Center provides these services at no cost (ovulation induction with clomid, letrozole or gonadotropins and intrauterine insemination) or at a significantly reduced cost (in-vitro fertilization). Appointments for ultrasounds and inseminations are on a space available basis only. On occasion, especially after weekends and holidays, availability may be limited. Also, the in-vitro fertilization (IVF) program has a very long wait list. Although we make every effort to accommodate all who require IVF, we cannot promise that we will be able to get everyone into a cycle.

There are many civilian providers locally who can treat infertility and you are encouraged to seek care with these providers if the space available policy or long wait list does not meet your requirements.

For more information please call TRIWEST at 1-888-874-9378.



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Dear New Infertility Patient:

Sometimes the first infertility appointment can be quite overwhelming as a lot of labs and tests are ordered for you and your husband. If you are not a feverish note writer, like me, you may get home and wonder did the doctor say to do this test on Day 3 or Day 21 and what medicine do I need to take....and so on. Therefore, this summary is provided to remind you of what needs to be done.

1. Basic infertility Lab work: The majority of your labs will be done on day 3 or day 21 of your menstrual cycle. **If day 3 or 21 is a Saturday get the labs on Friday. If day 3 or 21 is a Sunday get the labs on Monday.**

Day 3 FSH & Estradiol : to check your female hormones, MUST be done on day 2-3-4 of your bleeding, checks the capacity of your ovaries to continue to produce eggs.

AMH: a cytokine that is indicative of the number and quality of oocytes remaining in the ovary. This correlates with your ability to get pregnant.

TSH: thyroid stimulating hormone, the thyroid is a gland in your neck that produces hormone that regulates your metabolism. If it is too low or too high, it can contribute to infertility.

Prolactin: a hormone produced by your brain that regulates breast milk production, if it is too high it can contribute to infertility. This lab must be done before 10:00 am.

Treponema Pallidum Antibody: a syphilis test, may have implication for treatment during pregnancy.

Rubella: a test to see if you have been vaccinated and are immune to the German measles, most people have been.

HCab & HBSab: to check if you have been exposed to hepatitis

HIV: to test for Human immunodeficiency Virus, may have implication for treatment during pregnancy.

Testosterone, DHEAS: hormones that in excess may contribute to infertility.

Midluteal Progesterone: can be done on day 20, 21, or 22 to assess ovulation.

Genetic Screening: Autosomal Recessive Conditions: that may impact your baby's health if both you and your spouse are carriers

Cystic Fibrosis: Autosomal Recessive Lung Disease

Spinal Muscular Atrophy: Autosomal Recessive Muscular Disease

2. Semen Analysis, SEE INSTRUCTIONS.
3. HYSTEROSALPINGOGRAM (HSG) = a radiology test where dye is injected into your cervix and uterus, the dye will flow into your fallopian tubes if they are not blocked. If they are blocked, this test will tell us where they are blocked. If needed, antibiotics (doxycycline) are ordered for you to take starting two days before this test. The test is to be scheduled with radiology (433-6669) SEE ATTACHED INSTRUCTIONS.
4. If you have had previous surgery (for example, a tubal ligation and now want it reversed), it is very important that your doctor has a copy of your OPERATION REPORT. This can be arranged through medical correspondence ground floor, ocean side of Tripler or you can make arrangements yourself. Have the report faxed to: Attn: Infertility Clinic, Department of OB/GYN, Tripler Army Medical Center, at (808) 433-1552.
5. You must have an up-to-date PAP and pelvic exam and cervical cultures.
6. **When ALL lab work including male labs and semen analysis and radiology tests are completed, call the GYN clinic to schedule an INFERTILITY FOLLOW-UP APPOINTMENT. 808. 433-5925/5951.**

We sincerely hope this information will be of help to you. Should you have any further questions feel free to contact the infertility nurse at 808-433-5925/5951.

Sincerely,

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Semen Analysis Instructions for Male Patients

1. Please call the ***Core Lab Special Testing Section*** at ***808-433-6123*** to schedule appointments for semen analysis. ***Hours of operation are M-F from 0730-1500.*** Please leave a message if your call is not answered. Testing is not performed on weekends, holidays, or training holidays.
2. ***Patient Preparation:***
 - In order to obtain valid laboratory results, please abstain from ejaculation for at least 2 but not more than 7 days prior to your appointment. The sample will be collected in a private room in the Core Laboratory on the 2nd floor, G Wing (Mountainside).
 - Please bring your own reading material if desired. It may also be helpful to bring headphones or earbuds along with audio of your choice to minimize distractions.
3. ***Collection Instructions:***
 - ***Check in at Room 2G013***, Core Laboratory Special Testing. Valid Government I.D. is required.
 - You will be given a specimen container and a submission form that must be completed after collection of your semen sample.
 - Collect the sample by masturbation into the sterile container provided by the laboratory.
 - Do not use lubricants as they can negatively affect the test results.
 - It is important that the entire ejaculate is collected into the container. If any fraction of the semen sample is lost or spilled, please describe which portion (beginning or end) was not captured. This is necessary because results will be affected by loss of specimen.
 - Ensure the specimen container is labelled with the following information:
 - Last name, First name, Middle initial
 - Date of birth
 - Family Member prefix and sponsor's SSN
 - Date and time of collection
 - Submit the labelled sample, along with the completed submission form to Core Laboratory Special Testing immediately following collection.
4. Your results will be discussed at your follow up appointment.



Fact Sheet

From ReproductiveFacts.org



The Patient Education Website of the American Society for Reproductive Medicine

Hysterosalpingogram (HSG)

What is a hysterosalpingogram (HSG)?

A hysterosalpingogram or HSG is an x-ray procedure used to see whether the fallopian tubes are patent (open) and if the inside of the uterus (uterine cavity) is normal. HSG is an outpatient procedure that usually takes less than 5 minutes to perform. It is usually done after the menstrual period ends but before ovulation.

How is a hysterosalpingogram done?

A woman is positioned under a fluoroscope (a x-ray imager that can take pictures during the study) on a table. The gynecologist or radiologist then examines the patient's uterus and places a speculum in her vagina. Her cervix is cleaned, and a device (cannula) is placed into the opening of the cervix. The doctor gently fills the uterus with a liquid containing iodine (a fluid that can be seen by x-ray) through the cannula. The contrast will be seen as white on the image and can show the contour of the uterus as the liquid travels from the cannula, into the uterus, and through the fallopian tubes. As the contrast enters the tubes, it outlines the length of the tubes and spills out their ends if they are open. Abnormalities inside the uterine cavity may also be detected by the doctor observing the x-ray images when the fluid movement is disrupted by the abnormality. The HSG procedure is not designed to evaluate the ovaries or to diagnose endometriosis, nor can it identify fibroids that are outside of the endometrial cavity, either in the muscular part of the uterus, or on the outside of the uterus. Often, side views of the uterus and tubes are obtained by having the woman change her position on the table. After the HSG, a woman can immediately return to normal activities, although some doctors ask that she refrain from intercourse for a few days.

Is it uncomfortable?

An HSG usually causes mild or moderate uterine cramping for about 5-10 minutes. However, some women may experience cramps for several hours. These symptoms can be greatly reduced by taking medications used for menstrual cramps before the procedure or when they occur. Women should be prepared to have a family member or friend drive them home after the procedure in the event that they are experiencing cramping.

Does a hysterosalpingogram enhance fertility?

It is controversial whether this procedure enhances fertility. Some studies show a slight increase in fertility lasting about 3 months after a normal HSG. However, most doctors perform HSG only for diagnostic reasons.

What are the risks and complications of HSG?

HSG is considered a very safe procedure. However, there is a set of recognized complications, some serious, which occur less than 1% of the time.

- **Infection** - The most common serious problem with HSG is pelvic infection. This usually occurs when a woman has had previous tubal disease (such as a past infection of chlamydia). In rare cases, infection can damage the fallopian tubes or make it necessary to remove them. A woman should call her doctor if she experiences increasing pain or a fever within 1-2 days of the HSG.

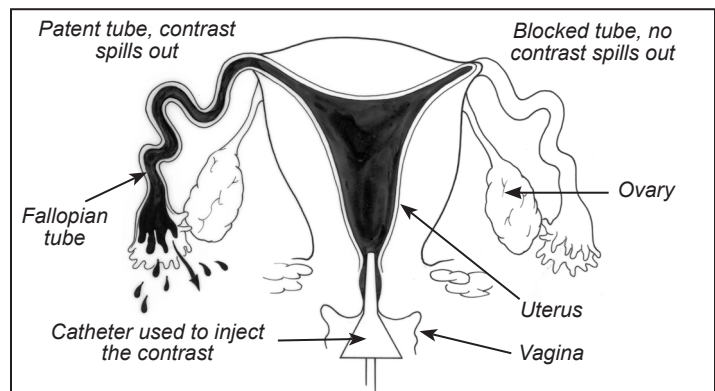
- **Fainting** - Rarely, the woman may get light-headed during or shortly after the procedure.
- **Radiation Exposure** - Radiation exposure from an HSG is very low, less than with a kidney or bowel study. This exposure has not been shown to cause harm, even if a woman conceives later the same month. The HSG should not be done if pregnancy is suspected.
- **Iodine Allergy** - Rarely, a woman may have an allergy to the iodine contrast used in HSG. A woman should inform her doctor if she is allergic to iodine, intravenous contrast dyes, or seafood. Women who are allergic to iodine should have the HSG procedure performed without an iodine-containing contrast solution. If a woman experiences a rash, itching, or swelling after the procedure, she should contact her doctor.
- **Spotting** - Spotting sometimes occurs for 1-2 days after HSG. Unless instructed otherwise, a woman should notify her doctor if she experiences heavy bleeding after HSG.

What is the next step if my tubes are blocked?

If your tubes are blocked, your doctor will likely recommend either a surgical procedure to directly view the tubes (laparoscopy) or to bypass the tubes and perform in vitro fertilization (IVF). This is a complex decision that should be discussed with your doctor. For more information, please see the ASRM booklet *Laparoscopy and hysteroscopy* and fact sheet *What do I need to know about conceiving after tubal surgery?*

Are there other options to evaluate tubal patency?

Laparoscopy can also determine if tubes are open, using a procedure called chromopertubation. An alternative procedure to evaluate tubal patency is a sonohysterosalpingogram (SHG). For SHG, a catheter (narrow tube) is placed in the uterus through the vagina and saline and air are injected. In women who have open fallopian tubes, tiny air bubbles may be seen going through the fallopian tubes during the ultrasound. However, this procedure is inferior to HSG for assessment of tubal patency.



Revised 2015

For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org



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Fertility Education

Infertility is generally defined as the failure to conceive after one year of unprotected intercourse. This condition is more common than many people realize. The Centers for Disease Control and Prevention (CDC) of the United States Department of Health and Human Services (HHS) estimates that roughly 6 million couples (or 10-12% of the reproductive age population) in the United States experience infertility. Educating yourself about what could be causing your infertility can help you take the right steps toward treatment.

According to the American Society for Reproductive Medicine (ASRM), approximately one-third of infertility cases are attributable to problems that affect women, about one-third to those affecting men, and one-third to a combination of problems in both partners. Overall, in about 20 percent of couples, infertility is unexplained.

The most important factor determining both fecundity (ability to have children) and the success of infertility treatment is female age. A female infant is born with a finite number of follicles and oocytes within her ovary. Age affects the ovaries in at least two significant ways: first, the number of ovarian follicles containing oocytes declines steadily and dramatically from about half a million at birth to about 1000 by middle age, and secondly, the incidence of chromosomal abnormalities in oocytes increases substantially after age 35. The end result of these age-related changes is reduced female fertility with increasing age. Other female factors that contribute to infertility include ovulation disorders, blocked fallopian tubes, congenital anomalies (birth defects), and uterine fibroids.

Infertility in men is most often caused by abnormal sperm production. Genetic diseases such as cystic fibrosis and chromosomal abnormalities are other potential causes of male infertility.

Below you will find further information on common causes of infertility. This information can serve as a useful guide. Our team of reproductive endocrinologists at Tripler Army Medical Center is here to properly diagnose the cause of your infertility, determine the best course of treatment, and guide you through the treatment process.



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Male Factor Infertility

A couple's infertility can be due to female factors, male factors, or a combination of the two. Most types of infertility due to female factors can be overcome by in vitro fertilization (IVF). Even the most severe cases of male factor infertility can be treated successfully with IVF in conjunction with intracytoplasmic sperm injection (ICSI). ICSI involves microsurgical injection of a single sperm into the egg by an embryologist. Sperm from infertile or subfertile men are obtained from ejaculates, epididymal aspirates, or testicular biopsies.

There are numerous etiologies for male infertility. While some causes are identifiable, others are not. In the last decade, advances in reproductive medicine have helped identify certain genetic causes of male infertility. These genetic causes are most relevant to men with extremely low sperm counts (< 5 million sperm per milliliter, or severe oligospermia) and those who have no sperm (azoospermia). Men with severe oligospermia or azoospermia are at increased risk of having a genetic abnormality when compared to men with normal sperm counts. These genetic abnormalities are important because they can be passed on to the next generation if ICSI is used successfully for treatment of the affected individual's infertility.

If the male patient under treatment has a chromosomal abnormality, his offspring from ICSI may be completely normal, experience infertility later in life, carry the same chromosomal abnormality, and/or be at risk for genetic diseases such as cystic fibrosis (CF). In fact, 17 to 67% of infertile men may be a CF carrier. While the majority of children conceived through ICSI involving men with low sperm counts are chromosomally normal, studies conducted worldwide suggest that offspring from ICSI conceptions are at increased risk for chromosomal abnormalities.

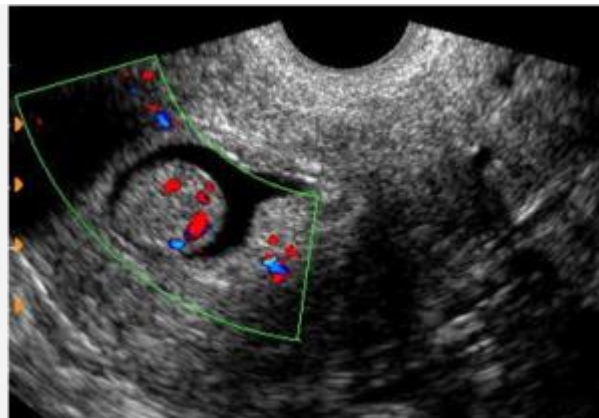
Couples with severe male factor infertility are strongly encouraged to seek genetic counseling before embarking upon IVF or ICSI. Genetic counselors are available by appointment at Tripler Army Medical Center.



Uterine and Tubal Factor Infertility

Tubal Factor Infertility affects about 25% of all couples who seek care for infertility treatment. This usually includes complete fallopian tube obstruction and partial tubal blockage from tubal scarring. Tubal factor infertility is most commonly the result of a prior pelvic infection, such as pelvic inflammatory disease, which may have happened without any symptoms. Additional causes of tubal factor infertility are endometriosis, scarring from prior surgery, and other causes such as a ruptured appendix. In Vitro Fertilization (IVF) was originally invented to help couples affected by tubal factor infertility to conceive and this is still the most effective way to achieve pregnancy for tubal factor patients. Occasionally, women develop fluid in their fallopian tubes called a hydrosalpinx. This fluid has been correlated with an adverse effect on pregnancy rates with IVF. The current recommendation is that hydrosalpinges be removed prior to proceeding with IVF, as they may decrease pregnancy rates.

Sometimes anatomic abnormalities of the uterus can contribute to infertility. The primary causes of uterine factor infertility are endometrial polyps, uterine fibroids, and endometrial scarring (Asherman's syndrome). Endometrial polyps are overgrowths of the endometrium and most of the time are benign and usually do not have negative impact of fertility. However, they have been correlated with decreased pregnancy rates after IVF and with an increased risk of miscarriage. Consequently they are routinely removed prior to in vitro fertilization or other infertility treatments.



Example of an endometrial polyp on Saline Infusion Sonography

Uterine fibroids are very common benign tumors of the uterine muscle. They may be a cause of infertility if they lie directly under the endometrial lining or are large enough to distort the endometrial cavity. If this is the case they may also negatively impact pregnancy. Your doctor may recommend fibroid removal depending on the location, size and number of fibroids.





Ovulatory Dysfunction

Ovulation is the process by which the ovary releases an egg and is essential for pregnancy to occur naturally. Ovulation requires appropriate function and release of hormones from the hypothalamus (part of the brain) and the appropriate response of the ovary to these hormones. Ovulatory dysfunction refers to any condition which interrupts regular ovulation.

Testing for ovulatory dysfunction is done by a thorough medical history and laboratory evaluation. Ovulation can be expected in the presence of regular monthly menses and the presence of other monthly symptoms, such as breast tenderness, moodiness, and bloating. The absence of regular monthly menses and the above symptoms may be suggestive of ovulatory dysfunction. Testing for ovulatory dysfunction is performed by checking hormone levels on day 3 and day 21 of the menstrual cycle in addition to other hormonal blood tests. Your provider will evaluate for ovulatory dysfunction as part of your initial fertility evaluation.

Ovulatory dysfunction can occur as the result of many different medical conditions. Any condition which affects the normal cyclical release of hormones from the hypothalamus can cause ovulatory dysfunction. Such conditions include thyroid disease, pituitary disease, stress, malnutrition, eating disorders, and many other diseases. Other diseases associated with ovulatory dysfunction include polycystic ovarian syndrome and premature ovarian insufficiency.

Treatment of ovulatory dysfunction may involve several different medications. If thyroid or pituitary disease is the problem, treatment with medications to restore these hormones to normal levels may result in normal ovulation. Many medications are available which your fertility specialist can prescribe to increase the probability of ovulating. The most commonly used medication for this is clomid, which can result in ovulation about 80% of the time. Other medications your provider may use to help you ovulate include letrozole, metformin, dexamethasone, and gonadotropins. Gonadotropins are hormones given as shots that can also be used to increase the number of eggs that develop. These medications are used in our practice to stimulate the development of many eggs in preparation for IVF. Patients with ovulatory dysfunction typically respond well with gonadotropin usage in IVF.

In summary, ovulatory dysfunction is a common cause of infertility and is screened for in all our patients. Ovulatory dysfunction may be treated effectively by ovulation induction medication or IVF.



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Clomid/Letrozole(Femara) Timed Intercourse & Intrauterine Insemination (IUI) Instructions

Dear Reproductive Medicine Patient,

If you were prescribed Clomid or Letrozole (Femara) for infertility treatment please follow these general instructions. You **WILL NOT** need baseline ultrasounds every month. We would like to assess your ovaries with ultrasound prior to treatment and then we will usually provide you with 3 months of medication.

STEP 1

- Cycle day # 1: first day of bleeding of first treatment cycle, call to make a “baseline ultrasound” (trans-vaginal ultrasound to assess pelvic anatomy).
- Please call # 808-433-5925/5951 to make an appointment on cycle day #2-5.

STEP 2

- Cycle day # 2-5: Appointment for “baseline ultrasound.”
- Start clomid 50 - 150 mg (1-3 pills/day) or letrozole/femara (5-7.5 mg(2-3 pills)) continue x 5 days. This will depend on how your doctor prescribes your medicine.

STEP 3- Depending on your treatment plan. You will either use ovulation predictor kits or ultrasound monitoring.

-If using ovulation predictor kits, start testing on cycle day # 12. Notify REI clinic for + kit to schedule IUI. If using Timed Intercourse, we recommend intercourse every other day starting on day of positive ovulation kit. On Fridays and/or days prior to a holiday please test at 0600. If you have a + kit on Friday or days prior to a holiday your IUI will need to be done the same day since we will be closed on the following day.

-If using ultrasound monitoring, present to clinic for your scheduled mid-cycle ultrasound, usually around cycle day # 14(12-15).

STEP 4

- hCG (Ovidrel Injection) to release oocytes- when instructed, **only for people not using ovulation predictor kits**

STEP 5

- Sperm Wash/ IUI Appointment. 24-36 hours after hCG injection – **only if doing IUIs.**

***. Your IUI appointment will be scheduled at TAMC. However, sperm wash is done at Fertility Institute of Hawaii. We will schedule both appointments for you. Please call 808-433-5925/5951

STEP 6- Wait 2 weeks after IUI and take a pregnancy test. Notify REI clinic of positive pregnancy test.



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STEP 7 – If menses arrive and you are not pregnant, you may start another round of clomid/letrozole and notify clinic for your mid-cycle ultrasound.

Reminders:

- All male and female labs must be completed prior to starting this process.
- Take your prenatal vitamins while you are going through this entire process, don't wait – until you are pregnant.
- Please refrain from smoking. This will decrease your pregnancy rates.

REI Appointment line: 433-5925/5951; REI Nurse: 433-5925/5951.



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FSH (Gonal-F/Follistim) & Intrauterine Insemination (IUI) Instructions

STEP 1

-Cycle day # 1: first day of bleeding, call to make a baseline ultrasound appointment (transvaginal ultrasound to assess pelvic anatomy). You will need a baseline ultrasound every month if using gonadotropins.

-Please call # 808-433-5925/5951 to make an appointment on cycle day #2-4. Gonadotropins need to be started by cycle day #4.

STEP 2

-Cycle day # 2-4: Appointment for ultrasound and injection teaching if needed.

-FSH dose: _____, Start Follistim/Gonal F shots.

STEP 3

-Return for monitoring ultrasound when instructed. Usually after 5-6 days of shots.

STEP 4

- hCG (Ovidrel Injection) to release oocytes. When your doctor decides that your follicles are ready for trigger.

STEP 5

- Sperm Wash/ IUI Appointment. 24-36 hours after hCG injection.

***. Your IUI appt will be scheduled at TAMC, however, sperm wash is done at Fertility Institute of Hawaii. (808) 545-2800. We will schedule both appointments for you. Please be aware, no appt availability for IUI at TAMC, you will be schedule for IUI at FIH. See FIH cost list for IUI's.

STEP 6 - Wait 2 weeks after IUI and take a pregnancy test. Notify REI clinic if positive pregnancy test.

STEP 7 – Start Endometrin progesterone. Some patients using gonadotropins benefit from progesterone luteal phase support. This will be decided by your doctor.

Reminders:

- All male and female labs must be completed prior to starting this process.
- Take your prenatal vitamins while you are going through this entire process, don't wait – until you are pregnant.
- No smoking for either you or your husband!! This will decrease your pregnancy rates.