In Vitro Fertilization- A Patient’s Guide

Delaware Valley Institute of Fertility & Genetics has been providing In Vitro Fertilization (IVF) services since 1994. For your convenience, we also have an office in Vineland and Lawrenceville, NJ. Marlton is a New Jersey suburb of Philadelphia and is conveniently located near the New Jersey Turnpike, Atlantic City Expressway and Interstate 295. We have daily office hours including evenings and Saturday mornings. The hours are Monday through Thursday 7:00 am – 8:00pm, Friday from 7:00 am – 4:00 pm, and Saturday from 8:00am – 11:00 am. We are available every day, including Sundays and Holidays for Egg Retrievals and Embryo Transfers. When undergoing an IVF cycle all ultrasound appointments, Egg Retrieval and Embryo Transfer are performed in our IVF Center in Marlton.

The following information has been provided to help guide you through the process of IVF as easily as possible. It contains several items that explain the process you will undergo, including, tests that need to be performed, necessary medications, and the paperwork required. Please read through it in its entirety, and call the IVF Nurse Practitioner, Elizabeth Shrader, with any questions at 856-988-0072 ext. 20.
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## About Us

### History:
The first “test tube baby: recently turned 30 years of age. Since that first IVF success, over one million healthy pregnancies have been conceived by means of this procedure. We at Delaware Valley Institute of Fertility & Genetics have been active since 1994 in refining these techniques to yield higher chances for successful conception. We believe every patient is different, every couple is different, and every problem is different. That is why we provide a full spectrum of care tailored to fit the specific needs of each individual patient or couple. At DVIF&G, we will not only help you become pregnant, but also help you carry your baby to full-term. This holistic approach is one of the many factors that set us apart from other centers.

### Our Staff

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<tr>
<td>Physicians</td>
<td>George S. Taliadouros, M.D. FACOG</td>
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<td>Akas Jain, M.D. FACOG</td>
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<td>IVF Nurse Coordinator</td>
<td>Elizabeth A. Shrader, MSN, APN-C</td>
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<td>IVF Laboratory</td>
<td>Khaliq Ahmad, PhD.</td>
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<td>Annelize Potgeiter</td>
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<td>Matthew Mueller</td>
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<td>Andrology Laboratory</td>
<td>Jaylene Edmead</td>
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<td>Ultrasound Technicians</td>
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<td>Vibha Mehta, BS, RDMS (Vineland)</td>
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<td>Grace Sveinbjoernsson BS, RDMS (Marlton)</td>
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<td>Melissa Bennett, RD, CDE</td>
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<td>Angela Santoro, RD</td>
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Throughout your treatment your contact person for questions will be the IVF Nurse Coordinator, who works closely with the physicians in planning and helping to facilitate your treatment cycle. As always, you are welcome to call her during normal business hours and if needed for emergent issues, the physicians are on call after hours.
II. Assisted Reproductive Techniques (ART)- General Information

ART includes various methods of aiding human reproduction through techniques that involve removing a woman’s eggs from her ovaries. The most common of these procedures is IVF. However, there is a small group of patients that may qualify for In-Vitro Maturation (IVM).

A. In-Vitro Fertilization & Embryo Transfer

IVF is a process by which one of more eggs (oocytes) are removed from the ovaries by a non-surgical needle aspiration through the vagina and then fertilized outside the body. If the male partner has a very low sperm count, then fertilization is achieved by injecting a single sperm into each egg in a process called Intra-Cytoplasmic Sperm Injection (ICSI). If the sperm count is normal, then the usual procedure is to place a droplet of washed sperm (50,000-100,000) onto each egg. Successfully fertilized eggs are called embryos. A select number of embryos are placed into the uterus for implantation and establishment of pregnancy. This process bypasses the fallopian tubes. It is ideal to have at least 4 mature eggs to start this process. The ovaries are stimulated to make more than the usual single mature egg. This is accomplished through the use of daily injectable fertility medications. This requires close monitoring of the follicle growth and hormone levels through blood tests and pelvic ultrasounds.

Please expect to be coming to the Marlton office on Monday, Wednesday, Friday and Saturday the week following your Friday stimulation start. This is necessary so we can evaluate your hormone levels within hours of your ultrasound, so that we can tailor your treatment to your body’s specific response. We try our best to accommodate your work schedule and give every attempt to give you the earliest appointment possible.

The IVF cycle steps:
1. Ovarian Stimulation
2. Retrieval of eggs while the patient is sedated
3. Fertilization of eggs
4. Transfer of a select number of embryos into the uterus
5. Option of freezing any extra embryos that are of good quality

B. In-Vitro Maturation (IVM)

IVM is a process similar to IVF. During this procedure a minimal amount of injectable medication is given to stimulate egg production by the patient’s ovaries, and oocytes are retrieved, in the same fashion as with IVF, when they are still immature. The retrieved oocytes mature in the laboratory using a special culture solution. The matured oocytes are then fertilized with ICSI, and the process continues as if the patient had a conventional In Vitro Fertilization-Embryo Transfer procedure.

Who is a good candidate for IVM?
- This treatment is reserved for woman with a history of Ovarian Hyperstimulation Syndrome (OHSS) with previous gonadotropin therapy, or in women with a high antral follicle count and are of normal weight.
- Women who are < 35 years of age and have normal menstrual cycles
- Women with estrogen-sensitive cancers, prior to chemotherapy

Advantages of IVM:
- Since IVM requires less fertility medication, this significantly lessens the risk for OHSS, a rare, but potentially serious complication.
- IVM is less expensive because it does not involve costly gonadotropin injections and requires less monitoring.
Disadvantages of IVM:

- It is reserved for a small group of women. If you are interested in IVM, please discuss this with your physician.
- IVM is still relatively new, the overall success rates are lower than with traditional IVF.
- Because the eggs collected via IVM are extremely sensitive, they need to be handled by a highly-trained embryologist.
- The outer part of these eggs can become tough for sperm to penetrate, making ICSI required.

A Typical IVM Cycle: (Please note this is a general scenario, each patient may respond differently)

- A typical IVM cycle involves 3 days of daily injections, beginning on Day 3 of the cycle, followed by transvaginal ultrasounds and blood hormone levels on Days 6, 7 and 8 (depending on your body’s response).
- The retrieval of oocytes occurs 2 days after there has been a change in the hormone levels and uterine lining.
  - On the day of retrieval you go home to rest.
  - The following day, your partner will return to the office to deposit a semen Sample; this will be used to ICSI and Fertilize the eggs.
- 3-5 days after fertilization, the embryos will be transferred to your uterus.
- 14 days after the transfer will be your initial blood pregnancy test.

C. Assisted Fertilization and Hatching

Intra-Cytoplasmic Sperm Injection (ICSI)

ICSI is designed to treat severe male factor infertility and/or failure of fertilization in previous IVF cycles. The procedures for ICSI are the same as in the standard In Vitro Fertilization except for the method of insemination. ICSI entails the insertion of a single sperm into the cell of an egg. Manipulation of the eggs requires special equipment specifically designed to perform this very intricate procedure.

Even under normal circumstances, approximately 25% of eggs fail to fertilize despite the presence of sperm. Approximately 10 percent of oocytes do not survive ICSI. Injected oocytes are cultured for approximately 18 hours and are examined for fertilization. Occasionally, even in a natural setting, some fertilized eggs will develop a third pronucleus before the egg begins dividing into two cells. Normal fertilization is indicated by the presence of two pronuclei. Each pronucleus contains the genetic material from one of the parents. After examination, the embryos are cultured for two days and then transferred to the uterus. If there are good quality embryos remaining after the transfer, the resulting embryos can be cryopreserved and stored for use at a later date.

ICSI has also been successfully employed with immature sperm, such as those derived from the epididymis and the testicle. Absence of sperm secondary to blockage or abnormality of the ejaculatory ducts may still allow sperm to move in the testes. In this situation, sperm are obtained from the epididymis by a procedure called Microsurgical Epididymal Sperm Aspiration (MESA), or from the testes by Testicular Sperm Aspiration (TESA). Its consistent success with all types of abnormal semen parameters and the ability to obtain high fertilization rates with immature or dysfunctional sperm has confirmed ICSI as the treatment of choice for male infertility.

In addition to its versatility, the fertilization and pregnancy outcome with ICSI in male factor cases is comparable to that obtained in standard IVF. Hundreds of thousands of normal babies have been conceived by the ICSI technique since its introduction in 1992.
There is no evidence in the observed risks of the pregnancy with the procedure by comparison with standard IVF, and no significant difference in the rate of miscarriage or congenital malformation. The fertilization rate with this procedure has been greater than 50% with those injected. Of the resulting zygotes, 70% will continue to develop. Indications for ICSI:

1. A very low number of motile sperm with normal appearance
2. Problems with sperm binding to and penetrating the egg
3. Antisperm antibodies in sufficient quantity to prevent fertilization
4. Prior or repeated fertilization failure with standard IVF-ET
5. Frozen sperm collected prior to cancer treatment that may be limited in number and quantity.

D. Assisted Hatching (AZH)

Assisted Hatching is intended to assist the embryo in breaking out if its “shell” in order to attach to the uterine lining. This procedure is performed just prior to transferring the embryos to the uterus by creating a small opening in the zona pellucida (shell) with the aid of laser. The risk of damaging the embryo from AZH is rare.

Indications for AZH:

1. All patients older than 37 years of age
2. All patients with an FSH > 10 mIU/mL
3. All patients with a previous failed IVF attempt.
4. All embryos with zona pellucida thicker than normal, determined by embryologist
5. All embryos that have only 4 blastomeres after 72 hours of incubation
6. All embryos with more than 20% fragments
7. All thawed-cryopreserved embryos

E. Embryo Quality

The quality of the embryo is an important factor, although not the only one, in the success of an IVF pregnancy.

Once the embryologist has determined that fertilization has occurred, usually between 16 and 18 hours after the eggs and sperm are placed together, it is allowed to develop for another 24 to 36 hours. You will receive a call the day following your retrieval, from the embryologist or the physician, indicating how many of the eggs fertilized.

Forty-eight hours after fertilization, the clinician evaluates the size and number of the divided cells, as well as the degree of fragmentation, the thickness of the shell surrounding the embryo and the number of nuclei per cell, among other indicators, to determine potential viability.

If there are many high-quality embryos on Day 3, the decision may be made to grow the embryos to the blastocyst (Day 5) stage. The embryo becomes a blastocyst on the fifth day of development. The embryologist looks for a single nucleus in each cell, or blastomere. More than one nucleus per blastomere indicates chromosomal abnormalities. With more regular cells and less fragmentation, the blastocyst has a better chance of adhering to the uterine lining and developing in a normal fetus. However, there are instances of successful outcomes with embryos that may not appear ideal. Other factors, such as the smoothness of the embryo transfer, are critical to achieving a full-term pregnancy, and it is not easy to predict an outcome solely based on embryo quality.

F. Number of Embryos to Transfer

The decision of how many embryos to transfer is based on the patient’s age, prognosis, and embryo quality. We follow the guidelines set forth by the American Society of Reproductive Medicine (ASRM) but also tailor the decision to what is best for each
particular couple’s circumstances. Our goal is to optimize the pregnancy rate while reducing the rate of high-order multiples (i.e. more than twins). Younger patients typically will have 1 or 2 fresh embryos transferred, but patients over 35 will typically have 2 embryos transferred if they are of good quality, or possibly 3 embryos of average quality. There is about a 1% chance of “identical twinning” occurring in each IVF cycle. This occurs when the embryo divides after arriving into the uterus.

G. Embryo Cryopreservation
At the end of an IVF cycle, there may be multiple embryos remaining that are of “good quality.” These can be preserved for another pregnancy attempt in your futures, thus saving you from having to undergo the entire ovarian stimulation and egg retrieval process again. Cryopreservation is performed on the fifth and sixth day of culture, and prior to the results of your initial pregnancy test. If you and your partner decide to participate in the embryo cryopreservation program, the embryologist will determine if there are any adequate embryos to freeze and store in liquid nitrogen. The embryos can be stored for an indefinite amount of time, however we will keep them at our facility for up to 5 years. At that time our facility will alert you and give you a referral to a long-term storage facility.

H. Frozen Embryo Transfer (FET)
A frozen embryo transfer (F.E.T.) is a programmed cycle; this includes the use of Lupron shots daily for approximately 3-4 weeks and the use of estrogen pills, and sometimes the vaginal estrogen ring. These medications are used to help “prime” your uterine lining to accept the thawed embryo(s). The thawed embryos are then transferred to your uterus.

I. Risks of IVF
Overall, the risks associated with IVF are minimal and rare. The two most common “side effects” are abdominal discomfort and multiple gestations.

1. Ovarian Hyperstimulation Syndrome
To increase the number of eggs that develop, a series of hormone shots are given to support the simultaneous growth of numerous follicles instead of just one. The hormones used in this regimen are known to have, or suspected of having a variety of side effects, some minor and some potentially major.

The most serious side effect of ovarian stimulation is ovarian hyperstimulation syndrome (OHSS). Its symptoms can include increased ovarian size, nausea and vomiting, accumulation of fluid in the abdomen, breathing difficulties, an increased concentration of red blood cells, kidney and liver problems, and in the most severe cases, blood clots, kidney failure, or death. The severe cases affect only a very small percentage of women who undergo in vitro fertilization—0.2 percent or less of all treatment cycles—and the very severe are an even smaller percentage. Only about 1.4 in 100,000 cycles has lead to kidney failure, for example. OHSS occurs at two stages: early, 1 to 5 days after egg retrieval (as a result of the hCG trigger); and late, 10 to 15 days after retrieval (as a result of the hCG if pregnancy occurs). The risk of severe complications is about 4 to 12 times higher if pregnancy occurs which is why sometimes no embryo transfer is performed to reduce the possibility of this occurring.

2. Cancer
Many have worried that the use of fertility drugs could lead to an increased risk of cancer—in particular, breast, ovarian, and uterine (including endometrial) cancers. One must be careful in interpreting epidemiological studies of women taking fertility drugs, because all of these cancers are more common in women with infertility, so merely comparing women taking fertility drugs with women in the general population inevitably
shows an increased incidence of cancer. When the analysis takes into account the increased cancer risk due to infertility per se, the evidence does not support a relationship between fertility drugs and an increased prevalence of breast or ovarian cancer. More research is required to examine what the long-term impact fertility drugs may be on breast and ovarian cancer prevalence rates. For uterine cancer, the numbers are too small to achieve statistical significance, but it is at least possible that use of fertility drugs may indeed cause some increased risk of uterine cancer.

J. Risks of Pregnancy

There is an increased risk of multiple gestation for women undergoing IVF. This is due to the increased number of embryos transferred to the uterus; the more embryos transferred, the higher the risk. Multiple pregnancies carry significant risks including: Premature labor and/or delivery, Maternal hemorrhage, Cesarean delivery, Pregnancy-induced high blood pressure, gestational diabetes.

Our doctors at DVIF&G will transfer the minimum number of embryos necessary to provide a high likelihood of pregnancy with the lowest risk of multiple pregnancy. If you do become pregnant with multiples, you should consult with a maternal fetal medicine specialist, a doctor specially trained in high-risk pregnancy, to discuss possible complications. If you become pregnant with more than twins, the specialist will discuss the process of selective reduction to improve your chance of a healthy pregnancy and healthy babies.

1. Selective Fetal Reduction

In an effort to lower the chance for poor outcome to the mother and/or newborns, patients carrying triplets or more are encouraged to consult with a High-Risk Obstetrician (Perinatologist). They can discuss the option of selecting only two fetuses to continue growing in the uterus. Selective Fetal Reduction is performed like an amniocentesis at 9-13 weeks gestation. This is obviously a difficult decision to make. This procedure is not without risks, as 5% of reductions will lead to loss of the entire pregnancy. No decision needs to be made in advance of you becoming pregnant, but we recommend that you explore your feeling regarding this matter as it sometimes influences the number of embryos that are transferred to your uterus.

2. What About Birth Defects?

The goal of IVF is to help you have a healthy baby. Overall, there does seem to be an increased risk of birth defects in children conceived through IVF compared to those who conceive naturally.

3. IVF and Miscarriages

The rate of pregnancy loss or miscarriage following IVF is similar to that in the general population with the risk increasing with the mother’s age. The rate of miscarriage may be as low as 15% for women in their 20’s to more than 50% for women in their 40’s.

There is a 2%-4% risk of an ectopic, or tubal pregnancy if an embryo moves from the uterus into the fallopian tube. If an ectopic pregnancy occurs, you will need medication to end the pregnancy or surgery to remove it. If you are pregnant and experience a sharp, stabbing pain, vaginal bleeding (large clots, bright red blood), dizziness or fainting, call your doctor immediately. These can be signs of an ectopic pregnancy.
K. Emotional Aspects Associated with IVF

We are aware of the intense emotions involved when a couple is battling infertility and its treatment. You and your partner may have been through years of treatment and disappointment. Men and women handle feelings differently, so it is very important to have good communication and understanding of what your treatment involves. You may experience anger, guilt, fear, shame, sadness and/or loss at different times. The stress of the IVF cycle can be great.

Realizing this, we can refer you for counseling services, should you need them. We work closely with several therapists in the area who specialize in treating patients with infertility. It is important for you to contemplate beforehand how you might react to the results of your pregnancy test. What are your feelings? How would you cope? Do you have support from family, friends, community? Are you financially ready? Are you emotionally ready? What are your feelings on selective reduction? What would you do if you conceived with triplets or quadruplets? If you are not sure how to answer these questions, please let our IVF coordinator know and she can get you in direct contact with a therapist.

L. Benefits of Acupuncture

It is notable that the treatment of both Female and Male Infertility has been described in Chinese medical texts dating back to the Western Han Dynasty (206 BC-24 AD). It is theorized that acupuncture provides many positive effects on the treatment process though actual research data in this area is controversial. We find that many patients feel a benefit by the stress reduction acupuncture may provide and support the use of acupuncture treatments by a highly-trained specialist used as an adjunct to the state-of-the-art fertility care we provide to help our patients achieve pregnancy.

III. Preparation for the IVF Cycle

A. Preparation

1. Consultation

   During the initial consultation, you will meet with either Dr. George Taliadouros or Dr. Akas Jain. A thorough medical history is obtained and any old medical records will be reviewed. We strongly encourage your partner to attend this session with you. The consultation allows both of you to ask questions while you learn about the different steps in IVF. We will discuss options suitable for you, to give you the best chance of becoming pregnant. It is highly recommended you bring a list of questions to ask during this meeting.

   Good health is necessary to achieve and maintain a healthy pregnancy. Smoking decreases the chances of a successful IVF outcome by approximately 50%. It is recommended that you stop smoking 3 months prior to the initiation of your IVF cycle. If you feel that you require assistance with smoking cessation, please let our staff know and we can provide you with the proper services. Also, women who are overweight or obese have a diminished chance for successful conception through IVF and tend to have more risks during pregnancy of getting diabetes, hypertension, and increased risk of cesarean section.

2. Consent Forms

   The IVF Nurse Coordinator will email the consents for you to download at your convenience. It is important that both you and your partner read through the entire consent packet, initial the bottom of each page, complete pages 21-26, but do not sign and date them until you are with the provider. If you have not read
through the consents prior to your appointment, you will be required to reschedule your appointment. The consents are valid for 365 days.

3. Medications
The medications required for your IVF cycle must be obtained prior to the start of stimulation. These medications are ordered via special fertility/mail order pharmacies. If you are self-pay, we will help find the pharmacies that will provide the medications at lowest cost to you. Once you receive the medications, you will be required to bring them to our office so that we can be sure that the pharmacy is sending what is needed for your upcoming cycle. Please remember it is important to ALWAYS bring a dose of each medication (i.e. Gonal-F, Follistim, Bravelle, Menopur, Lupron, Cetrotide, Ganirelix) with you to EVERY ultrasound appointment as you may need to take an immediate dose based on our findings.

4. Appointments
Please note that we are aware that you and your partners have very busy schedules, and that coming in frequently for ultrasounds and blood work can be difficult. We do our very best to accommodate your needs and will attempt to provide any means necessary to help make this process as convenient but also as successful as possible.
During your IVF cycle, you will receive a call back from our office after each visit to provide you with dosing and instructions until your next appointment. It is imperative that you provide us with a phone number where you can be reached between 1-3:30 pm. WE CANNOT LEAVE A MESSAGE, we must speak DIRECTLY with you.

B. Screening Tests and “Checklist Items”

1. Semen Analysis
We require that a semen analysis be performed within 6 months of the IVF cycle. This will assist the IVF team to decide if assisted fertilization (ICSI) is necessary. Please remember that 2 to 5 days of abstinence is recommended.
If you feel you may have difficulty collecting on the day of retrieval, or are going to be out-of-town, it is possible for us to cryopreserve your sperm and use as a back-up. Please tell us in advance, if this is something you wish to participate in.

2. Mock Transfer/Cervical Cultures/Pap Smear
Mock Transfer: This is a “trial run” for the embryo transfer. You must have full bladder. This test is to visualize the curvature and depth of your uterus so that when the embryo transfer takes place, we know to place the embryos to the correct depth. Drink 20-30oz of water by an hour prior to scheduled appointment.
Cervical Cultures: Every 6 months it is necessary for us to obtain cultures to evaluate for Gonorrhea, Chlamydia and Trichomonas. These cultures are obtained in a similar fashion to the Pap smear. Should there be an infection present, it must be treated prior to you embryo transfer.
Pap Smear: Every 12 months it is necessary to obtain a Pap smear, unless you have a history of abnormal pap smears. If you have had this performed within the last 365 days, please let us know and bring a copy of the report, as your insurance will not cover more than one pap per year (unless medically necessary).

3. Hysteroscopy
This test is performed at the same visit as the mock transfer and is used to evaluate the inside of your uterus. Anatomical abnormalities such as polyps,
fibroids, scar tissue and other uterine abnormalities can impede fertility treatment and pregnancy. If any of these are discovered, they will be managed to optimize your treatment cycle.

4. Baseline Ovarian Reserve Testing (Day 3 ultrasound and blood work)
This ultrasound is to identify that you have the minimum eggs required to initiate the IVF cycle. We are also looking for cysts, uterine abnormalities, and the lining of your uterus. We are also evaluating your estradiol, lutenizing hormone, progesterone and follicle-stimulating hormone. If any of these values are outside the normal range, we may need to post-pone your IVF cycle. You will receive a call from our office by 3:30pm that same day, with your instructions.

5. Infectious Disease Screening
In order to maintain compliance with the FDA, we are required to evaluate both you and your partner for infectious disease. Blood testing for HIV, Syphilis, Hepatitis B&C. Additionally, Rubella (German Measles), Varicella (chicken pox) testing will be done, since exposure during pregnancy can cause birth defects. If you are not immune to Rubella or Varicella, you will be given the option to proceed with IVF or to post-pone for 1-3 months so that you can be vaccinated. Testing for HIV is required so that proper counseling can be initiated prior to pregnancy, since the risk of transmission to the fetus/newborn is lowered with the use of anti-retroviral medications during pregnancy.

6. Medications
You should be taking a Prenatal Vitamin with 800mcg (8mg) of Folic Acid. Please let us know if you need any samples or if you have difficulty tolerating the vitamin. Also, if you are on Aspirin or any blood thinners, please let our staff know. Refrain from taking Ibuprofen at this time. If you have a cold, you may take Claritin, Benadryl or Sudafed. If antibiotics are prescribed by your physician, it is safe to take them.

C. Ovarian Stimulation Protocols
The purpose of ovarian stimulation with IVF is to yield multiple, healthy, eggs to fertilize. At DVIF&G, ovarian stimulation is individualized to achieve the best possible outcome for each patient. Prior to your IVF cycle, the doctors and nurse practitioner will meet to formulate your plan based on prior attempts, number of antral follicles, hormone levels, age and infertility diagnosis. Once your plan has been established, the IVF Coordinator will contact you to begin scheduling your checklist and order your medications.
To optimize the process to suit each patient’s needs, we use use multiple protocols. A basic summary of the most commonly used protocols can be found below. (remember length of stimulation and or medication combinations can vary):

1. OCP/Lupron (GF-Gonal-F, FS- Follistim)
This protocol is most often used in women who do not ovulate regularly, have polycystic ovaries, third party cycles, or for the purpose of scheduling cycle starts more precisely. You will begin birth control pills after the start of the first period. You will take the pill for a minimum of 14 days; however you may be required to continue the pill for additional time if your body does not become suppressed. Please note: it is NORMAL to spot during this time. After approximately 14 days, you will be scheduled for another ultrasound and blood, if your body is suppressed and there are no cysts or follicles present, you will begin the Lupron. You will take the birth control pill and the Lupron together for 5 days then you will stop the pill, but continue the Lupron daily until our office notifies you otherwise. You will return to the office approximately 10 days after you stop the pill to have an ultrasound and blood work so that you can start your IVF stimulation.
2. Lupron Down Regulation (GF-Gonal-F, FS- Follistim)

This is the same protocol as above, only birth control pills are not used. You will come into the office on Day 3 of your cycle, then return to the office for ultrasound and blood on day 18-22 to start your Lupron. Once you begin your Lupron, you will continue this daily, until notified otherwise. You will return to the office for ultrasound and blood work in approximately 14-20 days after the Lupron start, to start your IVF stimulation.

3. OCP/GnRH Antagonist (Cetrotide/Ganirelix)

This protocol is used in women with a lower antral follicle count and who have a history of recruiting follicles by Day 3 of the menstrual cycle, or for the purpose of scheduling cycle starts more precisely . You will come into the office on Day 3 for baseline ultrasound and blood. We will call you that afternoon to inform you to begin the birth control pill, which you will take for a minimum of 14 days. On, or around, the 14th day (usually a Monday) we will have you return to the office for ultrasound and blood to determine if we can discontinue the pill. If so, you will stop the pill for 5 days and return to the office that Friday for ultrasound and blood to start your IVF stimulation. Of note: it is expected that you will get a menses again after you discontinue the pill. You will begin the Cetrotide or Ganirelix AFTER you begin the stimulation meds (GF, FS, Menopur). It is important that you bring at least one pen with you to each appointment, in case we tell you to take it.
4. GnRH Antagonist (Cetrotide/Ganirelix)

This is the same stimulation protocol as above, only it does not involve the use of birth control pills. Once you have completed your checklist items, you call the office the \textit{FIRST} day of your menstrual cycle, even if it is a Sunday. Leave a message with the answering service and someone will return your call the next business day between 7 and 8 am. Plan on coming in that morning for ultrasound and blood, so that you can start your IVF stimulation.

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D. Cancellation of a Cycle

Rarely, a situation may arise that could lead to the cancellation of your IVF cycle prior to the egg retrieval. The reasons for this could be:

1. Poor Ovarian Response even after stimulation with high doses of medicine
2. There is a premature LH surge, meaning your body was not suppressed enough and began to ovulate before the majority of your follicles were mature.
3. Premature elevation of the Progesterone level prior to the injection of HcG
4. Excessive risk of Ovarian Hyperstimulation Syndrome due to too many ovarian follicles or a rapid rise in estradiol hormone.

- If this happens, there is a possibility the physician will perform the egg retrieval, however the embryos will be cryopreserved for a transfer once your body has recovered.

We do our best to avoid cancellation as much as possible, however sometimes it is unavoidable.

E. ART and Disability Leave

The following information is to address our office policy regarding disability leave while undergoing ART treatment. We will be happy to fill out any forms regarding short-term disability and or FMLA. However, this does not guarantee that your employer will allow you to use Short Term disability for ART therapy, as it is elective and not “medically necessary.” However, you may qualify for FMLA. It is our recommendation that you save up your sick/vacation/paid time off to use during the treatment cycle. There will be a $10 fee for filling out this paperwork, and will be completed within 7 business days.

IV. In Vitro Fertilization-Specific Instructions

A. IVF Process

1. Frequency of Appointments:

As previously stated, you will be required to come to the office for frequent ultrasounds and blood work throughout the IVF stimulation. It is very difficult to predict when the retrieval and/or embryo transfer will occur. The average IVF stimulation is 7-9 days, however can go as long as 12 days; it will depend on your body’s response to the medications.
2. **Vacations/Travel During IVF Stimulation:**
   Once you begin your stimulation medications, it is advised that you limit your travel during the cycle. If you foresee the need to travel, please discuss this with your care providers before the start of your stimulation.

3. **Prior to the Egg Retrieval:**
   Two days prior to your egg retrieval you will be in our office for ultrasound and blood. This is to determine if your body is ready to receive the “trigger shot,” (HcG) to induce ovulation.

4. **Your Phone Call Prior to Egg Retrieval**
   You will receive a call between 1-3pm, with specific timing and instructions regarding your retrieval. It is very important that you take this injection at the exact time we give you. It cannot be taken earlier or later, as it is very time-sensitive. Your retrieval time is scheduled approximately 36 hours after the injection.

   **Please have this paper ready to use as a resource:**
   - I am required to take _______ units of HCG at _______ pm
   - The day/time of my retrieval has been scheduled for _______ at _______
   - I was told to arrive at the office at _______ am
   - I am to have nothing by mouth after 12:00 AM
   - I will begin my antibiotic at this time_______ and continue until ______
   - I will begin my methylprednisolone at this time_______ and continue until______
   - If on Metformin, I was informed to discontinue my medication at this time____
   - My last dose on Lupron/Antagon/Cetrotide is scheduled for ____________
   - I am aware that my partner/husband must be present to deposit a specimen and to drive me home.
   - I am aware that I must bring $350 CASH for the Anesthesia Department.

5. **Day of the Egg Retrieval**
   You will need to be off from work on this day as you will be receiving anesthesia for the procedure, you will not be permitted to drive or make legal life-changing decisions for a minimum of 24 hours. When you arrive, the nurse will ask you to empty your bladder, vital signs will be taken and we will confirm the timing of your HcG dose. You will then be escorted to the surgical suite; your partner will be required to wait in the waiting room, until you have awakened from your procedure.

   Once in the surgical suite, you will be required to change into a gown, and place head/foot coverings on. You will then be escorted to the IVF suite and will be greeted by the anesthesia department, who will place an I.V. and begin fluids. Once the doctor is in the IVF suite, the anesthesia personnel will begin administering the sedation medication. Once you have drifted off to sleep, the doctor will begin the procedure.

   After completion of the procedure, the physician will discuss the outcome of the procedure with your awaiting partner. Your partner will then be taken to the collection room to produce a fresh semen specimen to be used for fertilizing your eggs. While this happens, you will be gradually awakened and taken to the recovery room where you will be closely monitoring prior to discharge (generally 1-2 hours)
6. Patient Instructions Following IVF Retrieval
   1. Begin taking the methylprednisolone 4x/day until the medication is complete
   2. Begin taking Prometrium 200mg 3x/day, this will continue until you have a positive pregnancy test. If it is positive, you will continue this medication until 8-12 weeks.
   3. Start IM injection of Progesterone in Oil tomorrow night: the dosage is 1cc daily in the evening. You will continue this medication until you have a positive pregnancy test. If it is positive, you will continue this medication until 8-12 weeks.
   4. You will be contacted by your physician tomorrow to inform you regarding the status of your embryo development.
   5. You WILL NOT begin the estrace until AFTER your embryo transfer.
   6. A prescription for Percocet will be given to you for any discomfort that you may experience. If you are allergic to this medication, please inform the doctor so that an alternate pain reliever can be prescribed to you.
   7. If you do not experience a great deal of discomfort after the retrieval, and feel uncomfortable taking narcotic pain medication, Tylenol 1000mg may be taken 4x/day.
   8. A prescription for nausea (Zofran), will be given to you prior to your discharge.
   9. Embryo transfer may occur on either day 2, 3, or 5 following the retrieval, as recommended by the embryologist and your physician.
10. It is normal to experience abdominal pain, cramping, tenderness and spotting after the procedure. Should you experience temperature > 100.5 excruciating pain or heavy vaginal bleeding (>1 pad/hr x 4 hours) please notify the office immediately, even if it is after hours.

7. Embryo Transfer
   1. Please arrive to the office at the specified time for the transfer of the embryos with a FULL BLADDER. Water is the best method. Avoid coffee, soda, and other beverages high in caffeine.
   2. You and your partner will meet with the physician to review the quality of embryos and sign the transfer consent.
   3. You and your partner will then be escorted to the procedure room for the embryo transfer procedure. If you are working with an acupuncturist, he or she may perform a session at this time.
   4. Prior to the procedure, the embryologist will ask you to confirm your name to match those of the labeled embryo dishes.
   5. Following the embryo transfer, you will remain resting for 30 minutes in a flat position prior to getting up and preparing to return home.

8. Patient Instructions Following IVF Embryo Transfer
* Please restrict activity the day of and the day after the transfer. We ask that you remain in bed on the day of the transfer and get up for bathroom use only.
You will be given strict instructions regarding activity, medications, and follow-up after the embryo transfer.

9. Follow-up After the Transfer:
You will be scheduled to return to the office approximately 14 days for your initial pregnancy test. Please refrain from taking a home test, as it can produce both false positive and/or false negative results from the hormones you are taking. **Please do not discontinue any of the medications prescribed to you without talking with one of our medical staff.** It is common to experience vaginal spotting, bloating, breast tenderness and cramping.

B. Information about Fertility Drugs
MEDICATIONS

Gonadotropins, Follistim, Gonal-F, Bravelle
Gonadotropins stimulate your ovaries to produce follicles that contain the developing eggs. Your ovaries will enlarge and you may experience what is often described as “twigging and pulling” in the pelvis. Other side effects you may experience include frontal headache, mood swings, and increased vaginal mucus.

You may experience some tingling or burning at the time of injection with some of the injectable medication. This should subside soon after you are finished. **If you continue to have burning for hours after the injection, reddened areas and/or rash, or a hard lump, PLEASE notify the doctor or one of the nurses.**

This medication is a daily injection until HCG is administered. The dosage is referred to as “AMPS” OR “VIALS”. You will be told the number of AMPS/VIALS of the medication (powder) to take. Take this medication around the same time every day as directed. Mix the medication just prior to using. **DO NOT PREMIX AND PLACE IN THE REFRIGERATOR.**

HCG
HCG is the medication that matures the follicles and prepares them for ovulation. You will be given instructions regarding the date and time you must take the injection. This injection is taken one time during each cycle.

PROGESTERONE
This medication is a natural, plant-derived hormone used to treat many conditions, some of which are: abnormal periods, aiding conception, maintaining pregnancy, hormone replacement therapy and other conditions as determined by your physician. You will have your progesterone level checked one week after you take the HCG injection. This is done in the office along with your ultrasound and blood work. Any of these medications will prolong the onset of your period.

There are different types of progesterone supplementation:

**Prometrium 100/200 mg tablets:** This medication is supplied in tablet form. You will be told how many tablets to take and when to take them. These are to be taken after meals. You may start this medication three days after HCG injection. Continue this medication until you are told to stop. This medication can cause you to feel tired, sleepy and dizzy at times. This is usually worse one hour after you take the medication. This common side effect can be lessened when the medication is taken with food. There will be a label on the bottle that tells you not to take it if you think you might be pregnant. Please note that this office would **NOT** give you anything that might harm you or your possible pregnancy.

**Progesterone in Oil:** This medication is taken in an injection. The dose is 50-mg/1 cc. This medication will be taken intramuscularly until you are told to stop. You may experience soreness at the injection sites. It is recommended that after each injection that the area be massaged for several minutes after, this may help to alleviate “knots” at area of injection. Remember to rotate butt cheeks with each injection. **If you experience a rash, reddened areas or itchiness, PLEASE notify a doctor or one of the nurses.**

LUPRON
Lupron is a multidose vial. You will use the same vial over and over several times during the cycle. The amount of liquid in the vial should be enough for one entire cycle. Once the lupron vial has been opened for more than 28 days it needs to be discarded.

Lupron is an agonist, a synthetic medication used to suppress your reproductive system. This means we do not want your body to control your menstrual cycle. Therefore, we give you a
medication that temporarily stops your body’s ability to control the menstrual cycle. Once you stop this medication your body will resume its normal action and your menstrual cycle will start again. Lupron achieves this by initially stimulating and subsequently depleting the pituitary gland from the release of hormones (LH & FSH) from the pituitary gland that control your menstrual cycle. This way Lupron prevents the communication between the pituitary gland and the ovaries and allows the gonadotropin injections to be the sole source of follicle stimulation. Because of its way of action, it is characterized as an agonist.

**CETROTIDE & ANTAGON**

Cetrotide and Antagon are packaged in single dose kits. You will use one kit per injection of either Cetrotide or Antagon.

Cetrotide and Antagon are also used to suppress your reproductive system and allow gonadatropin injections to be the sole source of follicle stimulation. However, Cetrotide & Antagon immediately suppress the release of LH and FSH from the pituitary gland. Because of their way of action Cetrotide and Antagon are characterized as antagonists.

**MIXING INSTRUCTIONS**

- Gather all materials needed. Your table will need to be cleaned with alcohol prior to mixing any medication.
- Wash your hands with antibacterial soap prior to mixing your medications.

**Mixing Lupron**

You will need the following supplies:
- Box of Lupron / Luprolide Acetate
- ½ cc insulin syringes
- Alcohol pads or bottle of alcohol
- 2x2 gauze square or cotton balls
- Band Aids
- Sharps container

1. Open vial of Lupron and clean off with alcohol. If you have already used the Lupron you will only need to clean off the top.
2. Obtain the ½” cc insulin syringe and pull _______units into the syringe.
3. Put the needle into the vial through the rubber stopper and push on the plunger to put air into the vial.
4. Turn the syringe and bottle over 180° so bottle is now over the syringe.
5. Pull back on plunger so the liquid goes into the syringe.
6. Pull liquid past the amount that you need.
7. Gently tap syringe so all air bubbles go to the top.
8. Gently push on plunger to put air back into the bottle and stop when you are at the line with the amount that you will need.
10. Refer to section for subcutaneous injection instruction.
Mixing Lupron Microdose

Same supplies as above
Follow the instructions as above steps 1-10
The Lupron Microdose is to be kept **REFRIGERATED.** This is a compounded medication. If the vial has been opened for 28 days or more, it must be discarded.

If you are using Menopur OR Bravelle

You will need the following supplies:
- 1 vial of 2 cc mixing liquid from Menopur box
- ______(#) vials of powder from Menopur box
- 3 cc syringe with
- QCAPS
- 27 gauge 3/8” needle
- Alcohol pads or a bottle of alcohol
- 2x2 gauze or cotton balls
- Band Aids
- Sharps container

1. Pull tops off vials.
2. Clean off tops with alcohol.
3. Using the 3 cc syringe screw on the QCAP
4. Put 27 gauge 3/8” needle aside to be used later.
5. Pull back on plunger to pull 1 cc of air into syringe.
6. Push needle through rubber stopper.
7. Gently push plunger to put air into vial. This creates a vacuum so the water can be withdrawn easily.
8. Pull back on plunger to pull all the liquid out into the syringe. This should equal 1 cc of the liquid.
9. Pull the syringe out of the vial and insert into the vial with the powder.
10. Gently push on the plunger to push the liquid into the vial. **It is important to do this slowly as not to make bubbles.**
11. Keeping the needle in gently swirl the vial to ensure all the medication is mixed thoroughly.
12. Pull all the liquid back into the syringe.
13. If you need more than one bottle of the powder repeat steps 5 - 11.
14. Pull back on the plunger with needle straight up in air to pull all the liquid out of the needle.
15. Unscrew the QCAP and replace with the 27 gauge 3/8” needle you took off when you started.
16. The needle should be facing upward so that all the air bubbles go to the top. Gently tap on syringe to help this happen.
17. Gently push on the plunger to expel all the air.
18. Replace cap on needle.
19. Proceed to instructions for subcutaneous injection.
MIXING TWO DIFFERENT MEDICATIONS
Mixing Follistim/ Gonal-F & Menopur:

You will need the following supplies:

- 1 vial of mixing liquid from Menopur box
- _______ vials from Menopur box and/or Follistim box
- 3 cc syringe
- 27 3/8” needle tip
- QCAPS (These are in the boxes)
- Alcohol pads or bottle of alcohol
- 2x2 gauze or cotton balls
- Band Aids
- Sharps container

1. Pull all tops off all vials.
2. Clean tops with alcohol.
3. Using the 3 cc 1 ½” 27 gauge needle unscrew needle and replace with the QCAP.
4. Using the QCAP, pull air back into the syringe to equal 1 cc.
5. Push needle into vial of liquid from Menopur box.
6. Pull back liquid to equal 1 cc. Make sure you tap the syringe so all air bubbles go to the top and expel into container.
7. Push needle into vial of Menopur powder and slowly push on plunger to put liquid into vial. **It is important not to do this too quickly so that bubbles do not form.**
8. Gently swirl the bottle to ensure all the liquid and powder are mixed.
9. Insert needle back into the vial and pull all the liquid back into the syringe.
10. If you are mixing more than one Menopur bottle repeat steps 4-9. If you are done move on to #11.
11. Unscrew the QCAP & replace with the 27 gauge 3/8” needle you took off when you started.
12. The needle should be facing upward so that all the air bubbles go to the top. Gently tap on syringe to help this happen.
13. Gently push on plunger to expel all the air.
14. Replace cap on needle.
15. Proceed to instructions for subcutaneous injection.
MIXING WITH THE MULTI-DOSE KIT
Mixing Gonal-F Multi-Dose Kit Alone:

You will need the following supplies:
- Gonal-F Multi-Dose Vial
- Pre-filled syringe of saline (bacteriostatic) solution
- Gonal-F Multi-Dose custom dosing injection syringe
- Alcohol pads or bottle of alcohol
- 2x2 gauze squares or cotton balls
- Band-Aids
- Sharps container

1. Pull top off vial.
2. Clean top of vial off with alcohol.
3. Carefully pull rubber cap from the Pre-filled syringe of saline solution.
4. Put needle through the rubber stopper.
5. Slowly push down on the plunger to inject water into vial. **Do not shake.**
6. After all solution is in vial, remove finger from top of plunger.
7. Allow plunger to rise to its original position.
8. Dispose of Pre-filled needle.
9. Clean top of vial off with alcohol.
10. Insert custom injection syringe into multi-dose vial, turn it upside down so needle points upward.
11. Slowly pull plunger back to amount desired.
12. Allow the air bubbles go to the top. Gently tap on syringe to help this happen.
13. Gently push on plunger to expel all the air.
14. You are done; proceed to instructions for subcutaneous injection technique.

- Medicine is now reconstituted. There is no need to mix any more Gonal-F for the remainder of your cycle. Just insert custom needle in multi-dose vial and expel desired amount.
Using the Gonal-F RFF Pen Alone:

You will need the following supplies:

- Gonal-F RFF Pen
- Pen needle
- Alcohol pads or bottle of alcohol
- 2x2 gauze square or cotton balls
- Band-Aids
- Sharps Container

Priming the Pen: **First use only:**
1. Remove pen cap and wipe threaded tip with alcohol.
2. Remove peel tab from outer cap on needle.
3. Screw needle on clockwise until needle is secure.
4. Remove outer needle cap. **Do not discard.**
5. **Set dose arrow at 37.5 IU.**
6. Pull out injection button until a click is heard.
7. Remove inner needle cap & hold pen with needle pointing upright.
8. Keep the needle pointing upright and push in injection button until a click is heard.
9. A small amount of liquid should appear at the needle tip.
10. You are ready for use.

Subsequent Use:
1. Remove pen cap and wipe threaded tip with alcohol.
2. Remove peel tab from outer cap on needle.
3. Screw needle on clockwise until needle is secure.
4. Remove outer needle cap.
5. Set dose arrow at desired amount & recheck your dosage before you proceed.
6. Load dosage by pulling out injection button until a click is heard.
   - The last visible flat arrow indicates loaded amount:
   - If set and amount loaded is too low: Turn dosage dial to correct dose and pull out injection button again.
   - If set and amount loaded is too high: Count the number of clicks 75 IU is equal to 2 clicks. Ex: 150 IU = 4 clicks
     300 IU = 8 clicks
   - Leave left over amount for next use.
7. Remove inner needle cap.
8. Proceed to instructions for subcutaneous injection.
9. Discard of needle by using the outer needle cap to unscrew the needle from the pen.
Using the Gonal-F RFF Pen OR Follistim Pen with Menopur:

You will need the following supplies:
- 1 vial of mixing liquid from Menopur box
- ____ vials from Menopur box
- Gonal-F RFF Pen or Follistim Pen
- Pen needle
- 3 cc syringe with
- QCAP
- Gonal F Needles (These are in the box)
- Alcohol pads or bottle of alcohol
- 2x2 gauze square or cotton balls
- Band-Aids
- Sharps container

1. Pull tops off vials of Menopur
2. Clean off tops with alcohol.
3. Using the 3 cc syringe unscrew needle and replace with QCAP
4. Pull back on plunger to pull 1 cc of air into syringe.
5. Push needle through rubber stopper.
6. Gently push plunger to put air into vial. This creates a vacuum so the water can be withdrawn easily.
7. Pull back on plunger to pull all the liquid out into the syringe. This should equal 1 cc of the liquid.
8. Pull back on plunger to pull the liquid out of the vial and insert into the vial with the powder.
9. Gently push on the plunger to push the liquid into the vial.
10. It is important to do this slowly as not to make bubbles.
11. Keeping the needle in gently swirl the vial to ensure all the medication is mixed thoroughly.
12. If you need more than one bottle of the powder repeat steps 5 - 11.
13. Remove the needle without drawing up any medication. Leave last mixed amount of med in vial.
14. **Now move onto the Gonal-F RFF Pen OR Follistim Pen**
15. Remove pen cap and wipe threaded tip with alcohol.
16. Remove peel tab from outer cap on needle.
17. Screw needle on clockwise until needle is secure.
18. Remove outer needle cap.
19. Set dose arrow at desired amount & recheck your dosage before you proceed.
20. Load dosage by pulling out injection button until a click is heard.
21. Remove inner needle cap.
22. Insert the Gonal-F RFF OR Follistim pen into the last bottle of Menopur mix and push down on the injection button.
23. You will now have a mixture of Menopur and Gonal-F OR Follistim in the vial.
24. Insert the QCAP in the vial.
25. Pull back on the plunger with needle straight up in air to pull all the liquid out of the needle.
26. Unscrew the QCAP and replace with the 27 3/8” gauge needle you took off when you started.
27. The needle should be facing upward so that all the air bubbles go to the top. Gently tap on syringe to help this happen.
28. Gently push on the plunger to expel all the air.
29. Proceed to instructions for Subcutaneous injection.
Using the Follistim Pen Alone:
You will need the following supplies:
- Follistim Pen
- Follistim AQ cartridge
- Pen needle
- Alcohol pads or bottle of alcohol
- 2x2 gauze square or cotton balls
- Band-Aids
- Sharps container

Priming the Pen: First Use Only
1. Remove pen cap.
2. Unscrew the pen body from the cartridge holder.
3. Take Follistim AQ cartridge from packaging and clean the rubber stopper with alcohol.
5. Screw pen body onto cartridge holder. The blue arrow should align with the yellow dash.
5. Again, clean the Follistim AQ cartridge rubber stopper with alcohol.
6. Remove peel tab from outer cap on needle.
7. Screw needle on clockwise until needle is secure.
8. Remove outer needle cap. **Do not discard.**
9. Remove the inner cap and discard.
10. **Turn the dosage knob to 25 IU.**
11. With the needle pointing upwards, hold pen and gently tap syringe to have all the air go to the top.
12. Press down on dosage knob.
13. You may see a small amount at the tip of the needle.
14. You are ready for use. You may need to repeat this step more than once for each Follistim AQ cartridge.
15. Once done priming the pen, discard of needle by using the outer needle cap to unscrew the needle from the pen.

Subsequent Use:
1. Remove pen cap.
2. Clean the rubber stopper of Follistim AQ cartridge with alcohol.
3. Remove peel tab from outer cap on needle.
4. Screw needle on clockwise until needle is secure.
5. Remove outer needle cap. **Do not discard.**
6. Remove the inner cap and discard.
7. Dial the amount of medicine, with the dosage knob, desired by turning the knob until the dot beside the correct number on the dosage scale is sitting in the middle of the dosage window.
   - If you over dial the amount of medicine, **do not turn the dial back down to the lower dosage, you will lose medicine.** Instead you must turn the dosage knob past the 450 IU mark, until it cannot turn any more. The dosage scale will then move freely and redial from the “0” mark.
13. Proceed to instructions for subcutaneous injection.
14. Discard of needle by using the outer needle cap to unscrew the needle from the pen.
Mixing Cetrotide:

You will need the following supplies:
- Box of Cetrotide
- Alcohol bottle or alcohol pads
- 2x2 gauze or cotton balls
- Band Aids
- Sharps container

1. Pull out prefilled syringe and bottle of powder from box.
2. Pull off white cap from syringe and attach the 20 gauge 1 ½” needle.
3. Put needle through the rubber stopper and push liquid into the bottle.
4. Gently swirl the bottle to ensure all of the medication is mixed.
5. Pull all the liquid back out of the bottle.
6. With the needle facing upward pull all liquid out of needle by pulling back on plunger.
7. Replace 20 gauge 1 ½” needle with 27 gauge ¾” needle.
8. Gently tap syringe to have all the air go to the top and gently push on plunger to expel air.
9. Proceed to subcutaneous injection instruction.

Mixing Antagon or Ganirelix

You will need the following supplies:
- Box of Antagon or Ganirelix
- Bottle of alcohol or alcohol pads
- 2x2 gauze or cotton balls
- Band Aids
- Sharps container

1. Open and remove prefilled syringe from box.
2. Pull off rubber covering from syringe.
3. Gently tap syringe to have all the air go to the top and gently push on plunger to expel air.
4. Proceed to subcutaneous injection instruction.
Mixing HCG (Novarel, Pregnyl) 10,000 units:

You will need the following supplies:

- 1 box of HCG 10,000 units
- 3 cc syringe with 18 gauge ½” needle
- 25 gauge 1 ½” needle
- Alcohol pads or a bottle of alcohol
- 2x2 gauze or cotton balls
- Band-aids
- Sharps container

Instructions to mix 10,000 units of HCG:

1. Pull plastic tabs off the top of HCG powder and HCG water (diluent).
2. Clean tops (rubber stoppers) with alcohol.
3. Take out 3 cc 25 gauge 1 ½” syringe and 18 gauge 1 ½” needle (for mixing). Unscrew 25 gauge 1 ½” needle from syringe and attach the 18 gauge 1 ½” mixing needle onto the 3 cc syringe. Place the 25 gauge 1 ½” needle aside. You will have to put in back onto the 3 cc syringe when it is time for your injection.
4. Draw back 2 cc of air into the 3 cc syringe. Then inject the air directly into the HCG liquid. (This is done to create a vacuum so that the water can easily be drawn into syringe).
5. Pull back 2 cc of water (a whole syringe full) into the syringe. Push needle into the bottle with powder and gently push the medication into the bottle. It is important to do this slowly as not to make bubbles.
6. Swirl mixture around gently until all of the HCG powder is liquefied. (DO NOT SHAKE). Draw liquefied HCG back into 3 cc syringe.
7. Unscrew 18 gauge 1 ½” needle and attach 25 gauge 1 ½” needle.
8. The needle should be facing upward so that all air bubbles go to the top.
9. Gently tap on syringe to have all the air go to the top and gently push the plunger to expel air.
10. Proceed to intramuscular injection site and administer injection.
Instructions to mix 5,000 units HCG:

1. Pull plastic tabs off the top of HCG powder and HCG water (diluent).
2. Clean tops (rubber stoppers) with alcohol.
3. Take out 3 cc 25 gauge 1 ½” syringe and 18 gauge 1 ½” needle (for mixing).
   Unscrew 25 gauge 1 ½” needle from syringe and attach the 18 gauge 1 ½” mixing needle onto the 3 cc syringe when it is time for your injection.
4. Draw back 2 cc of air into the 3 cc syringe. Then inject the air directly into the HCG liquid. (This is done to create a vacuum so that the water can easily be drawn into syringe).
5. Pull back 2 cc of water into the syringe. Push needle into the bottle with powder and gently push the medication into the bottle. **It is important to do this slowly as not to make bubbles.**
6. Gently swirl bottle to ensure all is mixed.
7. Pull back on plunger to pull 1 cc liquid back into syringe
8. Pull needle out of bottle and carefully recap needle.
9. Carefully unscrew 18 gauge mixing needle and replace with 25 gauge 1 ½” injection needle.
10. With the needle facing upward gently tap on syringe to encourage air bubbles to go to the top of the syringe.
11. Gently tap on syringe to have all air go to the top and gently push the plunger to expel air.
12. You are now ready for injection. Proceed to instructions for intramuscular injection.
Getting the air out of the syringe:

You should have a syringe liquid and all your prescribed amount of medication.

1. Using your filled syringe pull back on the plunger to pull all the liquid from the needle into the syringe.
2. If you are using the 3 cc syringe unscrew the mixing needle and replace with the injecting needle 22 gauge. The injection needle should be 22 gauge 1 ½”.

**NOTE: If you are using the 1 cc syringe skip this step.**
3. While holding the syringe at a 90° angle, with the needle up, tap on the syringe to get all the air to the top of the syringe. Gently push out all the air by pushing on the plunger until you get a small drop of the liquid at the top of the needle. There should not be any air bubbles in the syringe. If you do have bubbles, repeat steps. You are now ready for the injection.

Subcutaneous injection technique:

1. Prepare an area for injection along the thigh, the abdomen, upper arms, or upper, outer hips. The injection site should be rotated, i.e., if the thigh is your preferred site rotate from leg to leg and different sites along each leg.
2. Pinch skin and clean with alcohol and allow it to dry.
3. Insert the entire needle quickly into the site.
4. Inject the medicine by pushing on the plunger.
5. Withdraw the needle and hold pressure with a cotton ball.
6. Discard the needle, syringe and any glass into a Sharps container.
7. Some of the following may happen:
   a) You may notice some bleeding at the injection site. Do not worry – just apply pressure until it stops. You can place a Band-aid over the site if needed.
   b) Some clear fluid may leak from the site, which is all right. Just hold pressure to the area with a cotton ball or gauze.
   c) The area may bruise. This is all right. Do not have another injection in that area for two days.
   d) You may notice slight burning or stinging while you are injecting. You can apply ice to the area prior to the injection to help decrease this problem.

Intramuscular Injection Technique

1. Prepare an area on either hip (upper buttock below hip bone – see diagram). You need to rotate site every day.
2. Using your thumb and index finger, pull the skin taut.
3. Cleanse the area with alcohol and allow the skin to dry.
4. Insert quickly into the cleansed area. The entire needle should be inserted into the skin.
5. Check to make sure you are in the correct spot by pulling back on the plunger slightly and see if you have a blood return. If you do not have a blood return you can inject the medication. If you do have blood in the syringe, **DO NOT PANIC.** Simply withdraw the needle and insert in an area next to the original injection site and re-check for a blood return.
6. Discard the used syringe, needles, and any glass into a Sharps container.

***
For Your Information:

- Injection site may bleed – **HOLD PRESSURE**
- Clear fluid may leak from the injection site – **This is O.K. – HOLD PRESSURE**
- The area may bruise, which is O. K. Do not give another injection in that site for 2 days.
- If you get a blood return and mistakenly still give the medication – **It’s O.K. – DO NOT REPEAT WITH A SECOND INJECTION.**
- You may lie down or stand for your injection. If standing, apply your body weight to the leg not getting the injection. Whether lying or standing, turn your toe on the one leg getting the injection, it helps to relax the muscle.

If you are having trouble with your injection or are unsure about how to mix or administer a drug, please call the office to speak with a doctor or nurse.
PATIENT EDUCATION CLASS

Name:___________________________________ Date:________________________

**Purpose:** This education instruction is to familiarize you with the medications that you will be taking and how to properly administer them.

**Content:** *The following topics have been reviewed by the instructor:*

- Inventory of medications received ___/___
- **Asepsis:**
  - Proper hand washing
  - Cleaning preparation area
  - Handling medication ___/___
- Mixing & drawing up medication from a single vial/multiple vials ___/___
- **Administration:**
  - SQ(subcutaneous) ___/___
  - IM(intramuscular) ___/___
- Information packet given to patients ___/___

Patient Signature ____________________________________________

Instructor Signature _________________________________________
D. Instructions for Collecting Semen Specimen

In order to obtain correct results of your semen analysis test, please review with the requirements listed below.

1. **Abstinence of 2-7 days is required** prior to performing this test. This means no sexual relations or ejaculation for at least three days, but not more than seven days.

2. The specimen should be collected in our office collection room (Marlton) and must be in a sterile container provided by our office.

3. The specimen is to be collected by masturbation only. No lubricants can be used, as these may affect the integrity of the specimen and alter test results.

4. When you arrive at the laboratory, please label the specimen container with your first and last name prior to collection.

5. If you are interested in **cryopreservation** of sperm to use for future **intrauterine inseminations**, you must provide **2 ejaculates per cycle** to be frozen prior to the anticipated insemination date. These specimens must be collected 7 days apart. When scheduling these appointments with our office, please specify that you are freezing sperm for the purpose of IUI.

6. If you are undergoing **IVF**, you must schedule IVF Semen Testing prior to your retrieval date. When you schedule this appointment with our office, please specify that you need **IVF Semen Testing**. A portion of the ejaculate will be frozen as back-up for your egg retrieval, and will be automatically discarded after the procedure, if it is not used.

**You must have a scheduled appointment for any laboratory testing.** Please make arrangements by calling to (856) 988-0072.
**This form must be completed in its entirety, and brought with you on day of retrieval**

Delaware Valley Anesthesia Associates, LLC

**Patient Health History**

Name: ___________________________  Allergies _______________________

Date of Birth: ____________________  _______________________

Physician: ________________________ Are you allergic to Latex? Yes ___ No ___

Height/Weight: ____________________ Eggs? Yes ___ No ___

Procedure Date: ____________________ Soy Beans? Yes ___ No ___

Time of last food or beverage: ________

**Habits:**

Do you smoke? Yes ___ No ___

Do you drink Alcohol? Yes ___ No ___

Do you use recreational drugs? Yes ___ No ___

**Medications:**

Please list any medications you are currently taking, including non-prescription drugs, inhalers, diet products, and herbal remedies

<table>
<thead>
<tr>
<th>Drug</th>
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**Previous difficulty with Anesthesia?**

Yes ___ No ___ Family History ___

Hearing Aid? ___  Glasses ___  Contacts ___

Dentures? ___  Upper ___  Lower ___

Caps or Bridge Work? ________

---

PLAVIX or ASPIRIN Stopped.

**Check All that Apply:**

__ Heart Disease
__ Shortness of Breath walking up a flight of stairs
__ High Blood Pressure
__ Lung Disease/Asthma
__ Kidney Disease
__ Diabetes
__ Cancer
__ Seizure Disorders
__ Glaucoma
__ Stroke/TIA

__ Bleeding Disorder
__ Prosthesis/Implant
__ Pacemaker
__ Mastectomy
__ Shunt
__ Hepatitis
__ HIV/AIDS
__ Liver Disease
__ Other: _____________________

**Pregnant ___ Yes ___ No**

Date of LMP: __________

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***Additional Comments:***

__ I was instructed not to eat, drink, or take any medications (unless specified by my physician) after midnight last night and I have followed these instructions.
__ I have completed my Bowel Prep. ___ N/A
__ I have made arrangements to have an adult driver take me home. I understand that I will not be released by myself or in the company of a minor. I will not drive a car or take a cab home alone.
__ I have an advanced directive: Yes ___ No ___

Patient Signature   Date

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