

Delaware Valley Institute of Fertility & Genetics

6000 Sagemore Drive – Suite 6102

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The following section is all information pertaining the medications used in this office and how they are used. This section is used for both nursing education, as well as patient information. These pages may be photocopied and given to patients when they attend an injection teaching class, but are the primary resource for nurses when they are unsure of a medication and how it is used.

This section includes:

1. A summary of what the medications are and how they work.
2. Side effects of the medication
3. How to mix medications (with itself and other medications)
4. Discusses different injection techniques
5. Education Class acknowledgement statement

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MEDICATIONS

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 gonadotropin 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.

Gonadotropins, Follistim, Gonal-F, Menopur

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 the “trigger” 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.**

Low Dose HCG

HCG is the medication that can be given in place of Menopur. It is usually given in conjunction with Follistim and Gonal F. You will be instructed regarding the number of units to administer.

LUPRON

Lupron is a multi-dose 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.

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.

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Lupron Trigger

Lupron trigger may be substituted for HCG (Novarel or Pregnyl) in patients with elevated estradiol levels. This is used one time during the cycle, prior to your egg retrieval.

Novarel, Ovidrel, Pregnyl

These medications are used to trigger 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 1-2 times a day until you are told to stop. You may experience soreness at the injection sites. **If you experience a rash, reddened areas or itchiness, PLEASE notify a doctor or one of the nurses.**

Crinone 8% Vaginal Gel, Endometrin

These medications are administered via vaginal applicators, 1-2 times a day. They are usually started following ovulation and continued through early pregnancy. They may produce a vaginal discharge or irritation.

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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.

Administering 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.
9. Pull out needle.
10. Refer to section for subcutaneous injection instruction.

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Using the Gonal-F 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. Remove inner needle cap.
7. Proceed to instructions for subcutaneous injection.
8. Discard of needle by using the outer needle cap to unscrew the needle from the pen.

Using the Follistim Pen Alone:

You will need the following supplies:

- [Follistim Pen
- [Follistim AQ cartridge
- [Pen needle
- [Alcohol pads or bottle of alcohol

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- [2x2 gauze square or cotton balls
- [Band-Aids
- [Sharps container

Priming the Pen:

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.
4. Insert cartridge into cartridge holder.
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 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.

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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 (Ganirelix)

You will need the following supplies:

- [Box of Antagon
- [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 TWO DIFFERENT MEDICATIONS

Mixing Menopur :

You will need the following supplies:

- [1 vial of mixing liquid from Menopur box
- [1 vial of Menopur powder
- [3 cc syringe

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- [Q Cap
- [30 Gauge ½ Inch Needle
- [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 syringe, apply Q Cap
4. Attach Q Cap to vial of liquid
5. Pull back liquid to equal 1 cc.
6. Attach Q Cap to 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.**
7. Gently swirl the bottle to ensure all the liquid and powder are mixed.
8. Pull all the liquid back into the syringe.
9. If you are mixing more than one Menopur bottle repeat steps 4-8. If you are done move on to #11.
10. Remove syringe and gently swirl the vial to ensure the medicine is completely mixed.
11. Remove Q Cap and
12. Proceed to instructions for subcutaneous injection.

Mixing Follistim/Gonal-F with Menopur:

You will need the following supplies:

- [1 vial of mixing liquid from Menopur box
- [1 vial of Menopur powder
- [Follistim or Gonal F Pen
- [3 cc syringe
- [Q Cap
- [30 Gauge ½ Inch Needle
- [Alcohol pads or bottle of alcohol
- [2x2 gauze or cotton balls
- [Band Aids
- [Sharps container

- 1) Prepare Menopur as previously described, up to step #7.
- 2) Dial Follistim or Gonal F Pen to desired number of units.
- 3) Inject Follistim or Gonal F into final mixed vial of Menopur.
- 4) Draw up full amount of liquid from vial into syringe.
- 5) Proceed to subcutaneous injection instructions.

ADMINISTERING LOW DOSE HCG (NOT TO BE CONFUSED WITH HCG TRIGGER)

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You will need the following supplies:

Compounded vial of HCG

Insulin Syringe

Alcohol Pads

Sharps Container

Band Aids

1. Remove cap from vial
2. Clean top of vial with alcohol with each use.
3. Fill insulin syringe with air (number of units you plan to draw up).
4. Inject air into vial
5. Draw back same number of units of HCG
6. Proceed with subcutaneous injection instructions.

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 1/2" needle
- [22 gauge 1 1/2" 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 22 gauge 1 1/2" syringe and 18 gauge 1 1/2" needle (for mixing). Unscrew 22 gauge 1 1/2" needle from syringe and attach the 18 gauge 1 1/2" mixing needle onto the 3 cc syringe. Place the 22 gauge 1 1/2" needle aside. You will have to put it 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 1/2" needle and attach 22 gauge 1 1/2" 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.

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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 22 gauge 1 ½” syringe and 18 gauge 1 ½” needle (for mixing). Unscrew 22 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 22 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.

Administering Ovidrel Trigger

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You will need the following supplies:

- [Prefilled Ovidrel syringe with attached needle
- [Alcohol Swabs

Instructions for Administering Ovidrel

1. Remove rubber stopper that is covering needle.
2. Push the plunger carefully until a small drop of liquid begins to appear from the tip of the needle (this is to remove air from syringe).
3. Proceed with subcutaneous injection instructions.

Instructions for Administering Lupron Trigger:

You will need the following supplies:

- [Lupron Multidose Vial
- [Insulin Syringe
- [Alcohol Swabs
- [Sharps Container
- [Band Aid

1. This medication will be given to you in the form of a preloaded syringe.
2. Remove plastic cap covering needle.
3. Ensure that syringe is filled to 40 Unit mark.
4. Ensure there are no air bubbles in syringe. If bubbles present, push the plunger up and tap syringe to expel.
5. Reference subcutaneous injection instructions.

****This syringe should remain refrigerated until administered****

Instructions for Administering Progesterone in Oil

You will need the following supplies:

- [Progesterone in Ethyl Oleate, Sesame, or Peanut Oil
- [3 cc syringe with 18 gauge ½” needle
- [25 gauge 1 ½ ‘ needle
- [Alcohol Swabs
- [Sharps Container
- [Band Aid

1. Clean top of progesterone oil with alcohol.
2. Take out 3 cc syringe with 18 gauge 1 ½’ needle
3. Draw back 1 cc of air into 3 cc syringe. Then inject the air directly into the Progesterone oil. (This is done to create a vacuum so that the oil can easily be drawn into syringe).
4. Draw back 1 cc of oil into they syringe.

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5. Pull needle out of bottle and gently tap syringe to have all air go to the top and gently push plunger to expel. Air.
6. You are now ready for injection. Proceed to instructions for intramuscular 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.

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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.

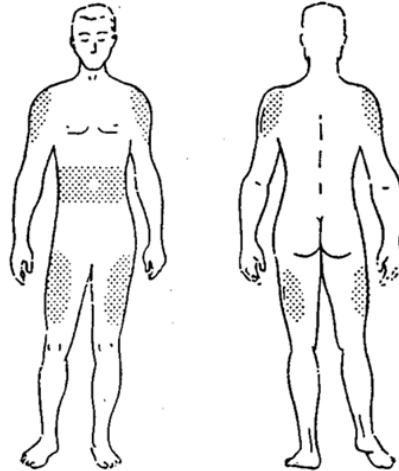
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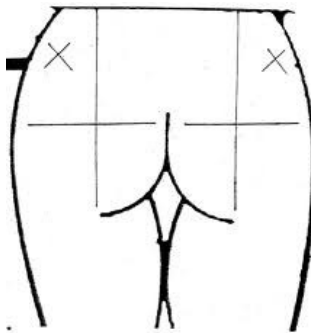
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SUBCUTANEOUS INJECTION SITES

The above shaded areas are the proper placements for the SQ (Subcutaneous) injections sites. The preferred sites are the thighs or belly, approximately 2 finger-widths around the belly button. The medications that are SQ injections are: Gonal-F, Follistim, Menopur, Low Dose HCG, Lupron, Antagon or Cetrotide.



INTRAMUSCULAR INJECTION SITES

The above "X" marks are the proper placements for IM (Intramuscular) Injections. Remember after inserting the entire length of the needle to pull slightly back on the plunger to ensure that there is NO blood collection in the hub of the syringe. The medications that are administered IM are: HCG & Progesterone in Ethyl Oleate.