

## GENERAL INFORMATION FOR OVULATION INDUCTION PATIENTS USING INJECTABLE MEDICATIONS

What follows is some information concerning normal reproductive physiology, the use of these injectable medications and an idea of what's ahead once you begin your therapy.

Usually, in a cycle which has not been stimulated with medications, you release only one egg at ovulation. HMG(Lepori, Repronex, Menogon, etc.) and FSH(Follistim, Gonal-F, and Brevelle) stimulate the growth of multiple follicles in the ovaries, thereby allowing release of more than one egg at ovulation. This medication is given on a daily basis by injection. Since these medications directly stimulate the ovaries, very close and careful monitoring is needed. This monitoring is done through blood tests to measure your estrogen level, and vaginal ultrasound examinations to track follicle growth. This gives us an indication of how many follicles have developed and their size.

Your injections usually begin on day 3 of your cycle; therefore, you must notify us of the first day of your period. Day 1 is the first day of flow not spotting. You will have your first blood test and ultrasound on cycle day 2 or 3. Subsequent testing depends on how you respond to the medication. We will inform you of when you need further monitoring, usually every one to three days.

In a non-stimulated cycle, a surge of luteinizing hormone (LH) at mid-cycle triggers ovulation. In cycles with injectable medicines, human chorionic gonadotropin (hCG) causes expulsion of the egg in the same way as does LH. Therefore, this injection is given to you once you have taken your maximum dosage of hMG or FSH (based on individual need).

If your husband cannot give your injections, you must make arrangements for a friend or relative to give them, because our office will be closed at the time you need to receive them. You may check out a video on how to prepare and give the medications.

We will be happy to provide you with a letter for your employer stating that you are under our medical care, to avoid problems on the days you may need to be late. Blood drawing and ultrasounds are performed beginning at 7:30-8:00 A.M.

If you do not become pregnant during this treatment cycle, call us during your period in order to make an appointment to discuss further treatment.

There are several things you should be aware of during your ovulation induction:

1. Do not take any aspirin or similar products (e.g. Advil, Aleve). If headaches occur, Tylenol is acceptable.
2. Advise us if you are currently taking any medications.
3. Often times the hip that was injected becomes sore several hours after the injection. The best remedy for this is moist heat for 30 minutes, either in a very warm bath or a heating pad with a moist heat attachment.
4. These medicines are potent drugs with potential to cause side effects. You may experience headache, irritability, depression or fatigue. Please notify us if you are concerned about reactions you experience.
5. These medications cause ovarian enlargement. Monitoring your response closely helps avoid the potential for excessive ovarian enlargement. Please notify us if you experience abdominal pain or abdominal distention.
6. Avoid strenuous exercise during ovulation induction.
7. Side effects of injectable medications include hyperstimulation syndrome; abnormal ovarian enlargement; bloating; abdominal pain; and pain, rash, swelling and/or irritation at the injection site.
8. There is an increased risk of multiple births (twins, triplets or more). The risk is usually estimated to be 25%, but this varies from physician to physician. There is also an increased risk of overstimulation of the ovaries and leakage or bleeding from the stimulated cysts. These are rare problems but may require hospitalization or even surgery should they occur. Publicized reports of ovarian cancer occurring after treatment with "fertility drugs" are unconfirmed, but this area has not yet been fully investigated. If you have questions or want more information about this medication, please ask us.

**For information on discount purchasing of these medications, please contact the following Internet Website:**

***<http://www.fertilityplus.org/faq/drugs.html>***

## OVULATION INDUCTION USING INJECTABLE MEDICATIONS

The following is a summary of the office visits and procedures that you will undertake once you begin treatment.

Day 1 of the menstrual cycle is defined by flow and not spotting. It is very important that you notify us of that day; we will begin ovulation induction therapy on cycle day 2 or 3.

On cycle day 2 or 3 it is necessary for you to have an ultrasound in order to determine the present state of your ovaries. You will also need to have a baseline estrogen blood level drawn. If everything is alright, you will begin your injections.

HMG (Repronex, Menogon, Lepori, etc) is given intramuscularly. You need to arrange for your husband, a friend or relative to give the injections, which should be given about 7:00 P.M. each day. Every woman responds differently to these medications, therefore you will be monitored closely. This monitoring is done to aid in timing intercourse or inseminations.

Follistim, Gonal-F, and Brevelle are given subcutaneously and may be self injected by the patient.

All blood tests are performed between 7:30 and 8:00 A.M. You should make the proper arrangements at home or with your employer prior to beginning the protocol. There can be no exceptions to these times.

Transvaginal ultrasound will be performed during your ovulation induction cycle. It is performed to determine the numbers and size of the follicles present.

While on ovulation induction therapy you will be contacted in the afternoon if you have had an ultrasound or lab work that day. We will inform you of how much medication to take, and when you need to return.

Around cycle day 8-9, your cervical mucus may be checked. It may also be necessary to have a postcoital test. HCG is given to stimulate ovulation. It is difficult to say on what cycle day you will receive hCG. Frequently hCG is given on the average of cycle day 9-11. HCG is to be given approximately 4:00 P.M. the day you are instructed to take it, but later administration is not a problem if necessary.

You will be instructed regarding timing of intercourse or inseminations.

If your period does not start, a pregnancy test is done 16 days after hCG was given. The pregnancy test is a "quantitative beta hCG". A level of less than 5 is a negative result. Tests with levels greater than 5 will be repeated several days later.

## RECONSTITUTING HMG (Repronex, etc.)

This medication must be administered soon after reconstitution. Therefore, prepare the medication just prior to injection. It can be refrigerated one day if necessary.

1. Prepare a clean work surface. Wash your hands and gather the medication, alcohol swabs, syringe and needle. Check the expiration date and make sure the medication is correct.
2. Attach one of the disposable needles to the syringe.
3. Open the sodium chloride ampule and medication ampules by holding the ampule base in one hand and snapping off the cap with the other hand. Sterile gauze or cotton may be used to protect your fingers.
4. Remove the syringe from its container. Carefully remove the needle shield (sometimes it may be necessary to wiggle it back and forth until it is free). Take care not to touch the needle or stick yourself. If you do touch the needle, dispose of it properly and replace with a new needle.
5. Withdraw 2 cc of sodium chloride solution.
6. Add the sodium chloride solution to the first ampule of medication by slowly pressing on the plunger of the syringe to expel the liquid. The medication will dissolve very quickly to form a clear solution. Do not shake the solution, as this may cause air bubbles. Draw up this medication in the syringe, and continue to inject it into subsequent ampules. You may dissolve up to four ampules of powder with 2 cc of solution.
7. If you need to change the needle, gently pull back on the plunger until all the medication is in the syringe and not in the needle or the hub of the needle. Change needles, then push medication into the needle.
8. Give the injection as instructed.

Your medicine is to be given at approximately 7:00 P.M. each day. You will be given a prescription for at least 10 amps plus refills. Buy medication as you need it. Be certain that you anticipate your weekend medication needs in advance, since many pharmacies are closed on weekends.

## HCG (HUMAN CHORIONIC GONADOTROPIN)

Human Chorionic Gonadotropin (hCG, Profasi, Pregnyl or Novarel) is a hormone that has different uses. As a fertility drug in women who are unable to achieve pregnancy, it is usually used in conjunction with other drugs (clomiphene or human menopausal gonadotropin). hCG is used to trigger ovulation in patients who have an appropriately-sized ovarian follicle.

Usually 10,000 i.u. hCG is given intramuscularly when prescribed by the physician. Additional, smaller doses may also be given for luteal phase support.

HCG therapy can cause symptoms of pregnancy, such as swollen and tender breasts, bloated stomach, and nausea. This is normal. Other symptoms include headache and restlessness. Usually, injectable medicine cycles are shorter than normal cycles. However, if your period has not started 16 days after your hCG injection, a pregnancy test should be done in our office.

## RECONSTITUTING HCG (PROFASI, etc)

1. Remove the pop top from both bottles and wipe the rubber stopper with an alcohol swab. Unwrap the syringe and remove the needle shield.
2. Draw 2 cc of air into the syringe by pulling out the plunger to the 2 cc mark. Inject the air into the vial labeled bacteriostatic water (diluent). Without withdrawing the needle turn the medication bottle upside down and withdraw 2 cc of diluent into the syringe.
3. Inject the 2 cc of diluent into the vial of powdered hCG (Profasi, Pregnyl, Novarel, etc.)
4. Withdraw the needle from the vial and shake gently until powder is dissolved.
5. Inject 2 cc of air into the prepared hCG vial (see step 2). This enables you to draw the 2 cc of hCG up into the syringe. Then withdraw the needle from the bottle.
6. To change needles before giving the injection, gently pull back on the plunger until all the medication is in the syringe (and not in the needle or the hub of the needle). Change needles, then push the medication into the needle.
7. Next, check for air bubbles. If you see any, hold the syringe with the needle pointing up, and tap the syringe lightly so the bubbles rise to its top. Then push the air out (be careful not to push out the medication).

HCG is usually given at 4:00 - 6:00 P.M. the day prescribed by your physician.

## INTRAMUSCULAR INJECTIONS

### Giving the Injection

1. Wash your hands and gather the medication, alcohol swabs, syringe, needle and bandaid. Check the expiration date, and make sure the medication is correct.
2. Prepare the medication as described on the medication sheet.
3. Check the injection site for any lumps or depressions in the skin.
4. Clean the site with an alcohol swab, beginning at the center and wiping outward in a circular pattern to remove dirt particles away from the site. Let the skin dry for 5-10 seconds. If it is not dry, the needle might push some of the alcohol into the skin causing a burning sensation.
5. For an injection into the buttocks you should be lying on your side with knees bent, lying face down, or standing or leaning against a surface with your toes pointed inward to relax the buttocks muscles.
6. Remove the syringe from its container. Carefully remove the needle shield (sometimes it may be necessary to wiggle it back and forth until it is free). Take care not to touch the needle or stick yourself. If you do touch the needle, put the cap back on it and replace it with a new one.
7. Prepare medication as described elsewhere.
8. With one hand stretch the skin taut around the injection site. This makes inserting the needle easier and helps disperse the medication after the injection. Position the needle with its bevel side up and at a right angle to the skin. Insert the needle with a quick thrust straight through the skin and deep into the muscle. Release the skin.
9. Holding the syringe firmly in place, pull back slightly on the plunger. If blood appears in the syringe, you have entered a blood vessel. Do not be concerned. Reposition the needle by gently pulling the needle out of the tissue just a little. Again check for a blood return. If no blood returns, slowly inject the medication. If blood appears in the syringe a second time, remove the needle and discard it. Attach a new needle to the syringe containing the medication and select a new injection site about one-half inch away from the original site. Repeat the injection procedure.
10. When ready to inject the medication, push the plunger with a slow, steady motion.

## INTRAMUSCULAR INJECTIONS (CONTINUED)

11. When you have injected all the medication, apply pressure over the needle at the injection site, and withdraw the needle gently, but quickly at the same angle used for insertion.
12. Massage the site with the alcohol swab to help distribute the medication and promote absorption.
13. Cover the injection site with a cotton ball or gauze until bleeding stops. If necessary, cover site with a Band-Aid to prevent any blood from getting on the underclothes.
14. To dispose of the used syringe and needle, place both in an empty 2 liter soft drink bottle used only for disposal of needles and syringes.

### LUTEAL PHASE HCG

When hCG is given for luteal phase support - hCG 10,000 units should be mixed with 4cc of the bacteriostatic water. 1cc of medication should be drawn up and given days 4, 7, and 10 after the initial dose of hCG (yielding 2500 units per/cc for each injection). The solution must be refrigerated between injections.

You will be told if you require luteal phase HCG. Most women do not require these additional injections.