
PATIENT INFORMATION REGARDING YOUR OVULATION INDUCTION TREATMENT CYCLE

This handout is intended to provide information about your ovulation induction cycle using menopausal gonadotropins. It describes the medications and treatment schedule. If you have further questions, please contact your physician.

Background:

In order to describe ovulation induction, it is important to recognize that a woman is born with all of her eggs. These eggs are stored in her ovaries, each inside a fluid filled sac called a follicle. Every month following puberty, the woman's body recruits a group of follicles to begin developing. This group of follicles signals the woman's pituitary gland (a group of special hormone producing cells deep within the brain) to release follicle stimulating hormone (FSH). FSH travels through the blood stream to the recruited follicles, stimulating them to enlarge and produce greater amounts of estradiol. Estradiol helps increase the amount of cervical mucus, thickens the endometrium (lining of the uterus), and sends a signal back to the pituitary gland that the follicles have been recruited.

During a normal menstrual cycle, when the pituitary gland receives this signal, it reduces the amount of FSH released, and most of the follicles become atretic - never to be used again. Only the follicle that is the most sensitive (selected at random) continues to grow, matures, and will ultimately ovulate.

The medications outlined below (collectively known as gonadotropins) contain FSH as their active ingredient. They are administered in the early part of the menstrual cycle (when the pituitary gland is reducing the amount of FSH released) and stimulate the continued growth of the group of follicles, allowing more than one to reach maturity.

Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®]:

Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®], are the medications used to stimulate the development and maturation of ovarian follicles. The active ingredient in these medications is follicle stimulating hormone (FSH). FSH is a glycoprotein hormone, and if taken orally would be digested by the acids in the stomach. Consequently these medications must be taken by injection. Repronex[®] may be taken either intramuscularly or subcutaneously. Bravelle[®], Follistim AQ[®], and Gonal F[®] are administered subcutaneously.

These medications help increase the chances of conception by:

- Improving the quality of ovulation allowing for the release of more mature eggs
- Increasing estrogen levels, which improves the quality of your cervical mucus (important for sperm survival)

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- Increasing progesterone levels, which thickens and matures the lining of your uterus (important for implantation and initial nurturing of the fertilized egg)
- Increasing the number of eggs released, which increase the odds that fertilization and subsequent pregnancy will occur.

These injections begin on the second, third, fourth or fifth day of your menstrual cycle and are continued until the developing follicles are judged to be mature. The length of time needed for adequate stimulation varies from patient to patient. Follicle maturity is determined by results of blood hormonal levels and transvaginal sonograms.

Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®] are rapidly excreted from the body and have no lasting effects on the menstrual cycle. There are very few interactions between these medications and other drugs, though you should inform your physician of any medications that you are currently taking. Alcohol and over-the-counter medications (except tylenol and ibuprofen) should be avoided during the period between your hCG injection and pregnancy test.

Normal activities and sexual relations may be continued during the period of stimulation, however, it is recommended that you discontinue any type of exercise that requires jumping. This activity may cause your ovaries to move and lead to discomfort.

Few side effects have been reported with Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®]. The reported side effects include abdominal discomfort breast tenderness, and low back pain. Any unusual symptoms should be brought to the attention of your doctor or nurse.

Risks of the medications listed above (Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®]) include hyperstimulation of the ovaries, which although uncommon, may be serious. In hyperstimulation, the ovaries become enlarged and fluid accumulates in the abdominal cavity. This may be painful. In rare instances (less than 1% of patients) hyperstimulation may require hospitalization.

Recently two studies have appeared in the medical literature addressing the possible linkage between the use of fertility drugs and the subsequent development of ovarian cancer. Fortunately, ovarian cancer is a rare condition, affecting less than 2% of women throughout their lifetime. There are several risk factors which have previously been associated with an increased risk of ovarian cancer including infertility. In the largest study to date, women who have been pregnant or taken birth control pills did not have an increased risk of developing ovarian cancer. More studies are needed to answer this important question. At the present time, the FDA has not requested a change in the labeling or prescribing of fertility drugs.

Preparing for Your Treatment Cycle:

- You should contact our office at least one week before you expect to start your first cycle of treatment. This will allow time to order your medications and schedule injection teaching.
- Before starting treatment you must come into the office for injection teaching. Our office staff will train you and/or your partner (or a friend) in the techniques of mixing and injecting the various medications. This teaching may be done in advance of your menstrual cycle or on the day you begin taking the medications.
- You are advised to contact your insurance company to find out if the medications are covered under your insurance plan. All patients with mail order prescription coverage should arrange to have the medications ordered well in advance to assure their arrival prior to starting a treatment cycle. If the medications do not arrive in time, they can be purchased at a local pharmacy (though the cost to you may be much higher).

Scheduling Your Treatment Cycle:

Please contact the office with the onset of your menstrual cycle. Should your period start over a weekend, call the office at 9:00 AM that following Monday morning.

Your Treatment Cycle:

These medications are potent and must be monitored carefully. To do this we perform blood tests to measure the level of estradiol in your blood on a frequent basis. The maturing follicles produce estradiol, and as the follicles grow, the level of estradiol rises. Your doctor can adjust the amount of medication that you take each evening in order to maximize your response to the treatment. Responses to the medication are highly individualized, but most persons will require five to eight blood tests per cycle.

Our office is open for blood drawing from 7:30 AM to 9:45 AM Monday through Saturday. Patients are seen on a first come, first served basis, and the average length of this visit is fifteen minutes.

Sonograms are performed at least two times during each treatment cycle. The first sonogram is done prior to starting the medications (baseline sonogram) and then other sonograms are performed towards the end of the treatment cycle to evaluate the number and maturity of the follicles (midcycle). If a postcoital test is to be performed, it will be done the day of the midcycle sonogram.

Sonogram appointments are scheduled between 7:30 AM and 9:45 AM Monday through Saturday. When you arrive at the office on the morning you are to have a sonogram, please sign in and empty your bladder. The average time of a sonogram visit is thirty minutes.

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The average length of a treatment cycle is 8 – 12 days of medication administration. The amount of medication needed varies from woman to woman, depending on how her ovaries respond. It is not predictable from month to month how many days the stimulation will take. The effects of gonadotropins are not cumulative.

Each day that you had blood drawn, your physician will review the results and make adjustments to your treatment schedule. We ask that you call (202) 293-6057 Monday through Friday between 2:30 PM and 3:30 PM to receive your dosing instructions for that evening. This phone line is strictly reserved for the exchange of medication information and it not answered at other times. You will also be instructed when to come back to the office for further monitoring. On Friday afternoons, you will be given a tentative dosage plan for the weekend. After reviewing your Saturday estradiol results, the physician on call will call you only if there needs to be a change in your treatment plan.

The Follistim AQ[®], Gonal F[®], Repronex[®], and Bravelle[®] injections should be given at the same time every evening. Please be consistent with the timing of injections.

Human Chorionic Gonadotropin (hCG) (Ovidrel[®], Pregnyl[®] or Novarel[®]):

When the serum estradiol level and transvaginal sonogram indicate follicle maturity, an additional medication, hCG, is given to induce final egg maturation. hCG comes either as a premixed ready-to-inject syringe (Ovidrel[®]) or in a vial containing 10,000 units of hCG in a dry powder form. This powder needs to be dissolved in 1 cc of the diluent provided with the hCG. Ovulation typically occurs between 38 and 48 hours after hCG administration. The timing of this injection is critical and the exact time will be specified, based on your individual cycle.

You will then be instructed on the timing of intercourse (or when to return to the office for an intrauterine insemination).

Monitoring of the Luteal Phase:

One week after hCG administration, you should return to the office for a progesterone blood test. This test confirms ovulation and gives your physician insight into the adequacy of your endometrium (the lining of the uterus).

Depending on the level of progesterone, your doctor may prescribe progesterone (Prometrium[®]). Prometrium[®] is available in 100 mg and 200 mg capsules. The capsules are generally taken orally, however, when undergoing fertility procedures, the preferred method of administration is vaginally. This allows maximal delivery of the progesterone to the uterine lining while minimizing the side effects.

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Testing for Pregnancy:

Pregnancy tests measure the level of hCG in your urine or blood. Your treatment involves taking one or more injections of hCG. Consequently, you may have a positive pregnancy test for several days following the last hCG injection.

You should come in to the office for a pregnancy test two weeks after your last hCG injection.

Length of Treatment:

There are many different factors involved in estimating the chances of conception. In general, the chances of conception in an individual cycle range from 5 – 20 percent. Therefore, you may require several months of treatment before achieving a pregnancy. Your physician will be able to give you a better estimate of your individual chances of success.

Questions:

Please contact our office with any questions you may have about gonadotropins and their monitoring.

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