



OVULATION INDUCTION WITH GONADOTROPINS

Menopur, Follistim, Gonal-F and Bravelle are injectable drugs used to stimulate ovulation. Menopur contains the hormones FSH and LH which are responsible for stimulating the growth and maturation of ovarian follicles and eggs. Follistim, Gonal-F and Bravelle contain only FSH. These drugs may be used alone or in combination. These are very powerful drugs and, for this reason, you will be carefully monitored during its administration.

Your physician will plan your medication schedule based on your normal menstrual cycle and history. Prior to beginning the injections (day 1, 2, 3 or 4 of your cycle), you will have bloodwork (BhCG, FSH and estrogen) and an ultrasound to rule out ovarian cyst(s) and to obtain an antral count (number of potential follicles or egg sacs). Based on these results, you will begin injections on day 3 or 4 of your cycle. You will take injections daily for several days prior to returning to the clinic for monitoring. On your first day of monitoring, we will draw blood for estradiol and progesterone levels and look at your ovaries by ultrasound to evaluate your progress. Based on the results of your sonar and blood tests, we will plan the rest of your cycle. You will more than likely require further medication and monitoring. You must check your patient voicemail to receive further instructions.

When the sonar and blood reports indicate that your follicles are mature, we will trigger your ovulation with another medication called Human Chorionic Gonadotropin (HCG). This shot may cause a home pregnancy test to yield false positive results for 14 days after administration.

There are risks and side effects associated with gonadotropin therapy. Side effects are usually mild and may include mood swings, breast tenderness, abdominal bloating, fluid retention and pain or irritation at the injection site. Infrequently, more serious side effects occur which may include pelvic pain, ovarian enlargement, weakness or dizziness. Rarely, ovarian hyperstimulation syndrome (OHSS) occurs. This is a very serious, potentially life threatening condition occurring in 1 - 5% of patients receiving gonadotropins. OHSS is characterized by an excessively elevated estrogen level and enlargement of the ovaries. Fluid accumulates in the abdomen causing weight gain and extreme abdominal bloating. Nausea, vomiting and decrease in urinary output occur and the patient may experience difficulty with breathing. Hospitalization may be required. Very young women and those with polycystic ovaries are at greatest risk for OHSS (see "Ovarian Hyperstimulation Syndrome").

There may be other adverse effects related to gonadotropin therapy which are currently unknown, that may be revealed in the future. We encourage our patients to read the manufacturer's package insert and other literature provided. If you develop these symptoms, call the office immediately.

It is unknown whether the use of these medications may result in an increased incidence of ovarian cancer later in life. The risk of ovarian cancer seems in part related to the number of times a woman ovulates. Infertility increases this risk; birth control pill use decreases it. Controversial data exists that associate ovulation stimulation drugs like gonadotropins to the risk of future ovarian cancer. While research is underway to help clarify this issue, the careful use of gonadotropins is still reasonable, especially considering that pregnancy and breast feeding reduce cancer risk.

The risks of taking these medications may include the chance of a multiple pregnancy developing such as twins (15-20%), triplets (3-5%), and rarely quadruplets or greater. Multiple pregnancy increases the risk of premature labor, which increases the risk of premature birth and associated problems such as neurological defects, such as cerebral palsy in surviving infants, pulmonary problems, and neonatal mortality or death. The risk of pregnancy loss, pregnancy induced hypertension, hemorrhage and other significant maternal complications may be increased. Should you have a multiple gestation, you should obtain care from an obstetrician who can provide referral to a medical facility that has an appropriate neonatal service, in the case it is needed. We recommend that you discuss all the above issues with your obstetrician should you achieve a multiple pregnancy. (See "Therapy Choices Including High-Risk Multiple Pregnancy")

At least 20 to 25% of women with a positive pregnancy test will not continue the pregnancy to full term. Should your pregnancy loss occur in the first six weeks following ovulation, you may not require any further therapy other than monitoring with ultrasound and blood tests. Further procedures are rarely needed. It is also possible that a woman may have a tubal (ectopic) pregnancy. This occurs rarely, in 3-5% of pregnancies. This condition happens because the embryo implants in the tube instead of implanting normally in the uterus. If a tubal pregnancy occurs, it may be necessary to surgically remove the embryo or the tube itself. We may refer you to your own obstetrician/gynecologist if one of these complications occurs, should you so desire. If your pregnancy is successful, you will be referred to your own obstetrician for further care.

Very few pharmacies keep Follistim, Gonal-F, Bravelle, or Menopur in stock. The nursing staff will provide you information on pharmacies that stock these medications.

Follistim, Gonal-F, Bravelle and Menopur are given by injections. It will be necessary for you and your husband to learn how to give these injections. You must schedule an appointment with a nurse during regular office hours (Monday-Thursday, 8:00-4:00 p.m., or Friday 8:00-2:00 p.m.) for injection instructions.