



AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

Formerly The American Fertility Society

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PATIENT'S FACT SHEET

Side Effects of Gonadotropins

Gonadotropins are fertility medications that contain follicle stimulating hormone (FSH), which is produced naturally by the pituitary gland, alone or combined with luteinizing hormone (LH), also produced by the pituitary gland. A related medication is human chorionic gonadotropin (hCG) which is structurally similar to LH and simulates the natural LH (ovulation) surge.

Gonadotropins are used to induce follicle development and ovulation in women who do not ovulate. They are also used to induce development and ovulation of multiple follicles in women undergoing advanced reproductive therapies such as in vitro fertilization, or superovulation and intrauterine insemination. There are a variety of gonadotropins commercially available and others in various stages of research and development. Careful monitoring of patients is required when gonadotropins are used in order to minimize the risk of side effects, which are discussed below:

1) Ovarian Hyperstimulation (OHSS). OHSS can either be mild or severe. The mild form occurs in 10% to 20% of cycles and results in some discomfort but almost always resolves without complications. The severe form occurs approximately 1% of the time. The chance of OHSS is increased in women with polycystic ovarian syndrome and in conception cycles. When severe, it can result in blood clots, kidney damage, ovarian twisting (torsion), and chest and abdominal fluid collections. In severe cases, hospitalization is required for monitoring but the condition is transient, usually lasting only a week or two. Occasionally, drawing fluid out of the chest or abdominal cavity decreases symptoms. The best prevention is to withhold hCG administration and prevent ovulation when ultrasound or hormone testing indicates a high risk for severe OHSS. The use of ultrasounds and/or serum estradiol levels will enable your physician to predict your risk.

2) Multiple Gestation. Up to 20% of pregnancies which result from gonadotropin cycles are multiple, in contrast to a rate of 1% to 2% without fertility medications. While most of these pregnancies are twins, a significant percentage (up to 5% are triplets or higher. High order multiple gestation pregnancy is associated with increased risk of pregnancy loss, premature delivery, infant abnormalities, handicap due to the consequences of very premature delivery, pregnancy induced hypertension, hemorrhage, and other significant maternal complications.

3) Ectopic (Tubal) Pregnancies. While ectopic pregnancies occur 1% to 2% of the time in the general population, in gonadotropin cycles the rate is slightly increased. Ectopic pregnancies can be treated with medicine or surgery. Combined tubal and intrauterine pregnancies (heterotopic pregnancies) occasionally occur with hMG and need to be treated with surgery.

4) Adnexal Torsion (Ovarian Twisting). Less than 1% of the time, the stimulated ovary can twist on itself, cutting off its own blood supply. Surgery is required to untwist or remove the ovary.

5) Gonadotropins and Ovarian Cancer. The link between the use of gonadotropins and the development of ovarian cancer is unknown and is the subject of ongoing research.

For more information about gonadotropins and other fertility medications, please read the ASRM patient information booklet titled Ovulation Drugs.

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