

Infertility Medications and Their Uses

Your Healthy News – Fertility Newsletter

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If you have had trouble becoming pregnant you are not alone. It is estimated that 10-15% of couples in the United States are infertile.² The inability to become pregnant and/or remain pregnant until successful delivery may depend on one or more of various factors. The issue causing the infertility may be attributed to the male, female, or both in some circumstances.

Assisted Reproductive Technology (ART) is used on its own and in conjunction with medications to assist with fertility issues. Examples of ART include In Vitro Fertilization (IVF), different methods to remove sperm from men, injecting sperm into an egg, or assisted hatching.² With the growing number of solutions for infertility, it's best to know what medications might be prescribed and their role(s) in increasing your chances of conceiving.

Medication Treatment Options

Ovarian Stimulation

- Clomiphene citrate (Clomid®, Serophene®) is a drug that has estrogenic and antiestrogenic properties believed to initiate ovulation by stimulating the pituitary gland to release FSH & LH.^{2,3} This drug is contraindicated in women with uncontrolled thyroid/adrenal dysfunction, endometrial carcinoma, and/or ovarian cysts. Clomiphene is taken orally, daily for 5 days and may be repeated in cycles.³
- Synthetic Human Chorionic Gonadotropin - hCG (Pregnyl®, Profasi®, Novarel®, Chorex®) is a drug that once administered simulates the mid-cycle peak of luteinizing hormone (LH), which typically stimulates ovulation. It is contraindicated in women who experienced puberty earlier than normal. hCG is injected into the muscle.³
- Human Menopausal Gonadotropin - hMG (Pergonal®, Repronex®, Menopur®) produce follicular growth in the ovaries. Once a follicle has matured, hCG must also be given. This drug is contraindicated in men with primary testicular failure, and women with primary ovarian failure (high FSH levels), ovarian cysts, and/or uncontrolled thyroid and adrenal dysfunction. It is injected into muscle daily for 7-12 and sometimes up to 20 days.³

Ovarian Stimulation, continued

- Gonadotropin-Releasing Hormone Analogs are indicated in women who ovulate too early or have irregular ovulatory cycles, during hMG treatment. They work by decreasing pituitary gland activity.²
- Follicle Stimulating Hormone (FSH)
 - Urofollitropin (Fertinex[®], Bravelle[®]) FSH, in addition to LH stimulates follicular growth and maturation. It is contraindicated if you have ovarian cysts, primary ovarian failure, and/or uncontrolled thyroid/adrenal failure. Following administration, chorionic gonadotropin (hCG) is given in addition to further trigger ovulation. It is administered by injection into muscle or subcutaneous fat tissue.³
 - Follitropin alfa (Gonal-F[®]) stimulates follicular recruitment, growth, and maturation. It is contraindicated in women with primary gonadal failure or ovarian cysts. Follitropin alfa is injected into fat tissue and hCG is administered 1 day after the last dose.³
- Bromocriptine (Parlodel[®]) and Cabergoline (Dostinex[®]) inhibits prolactin secretions from the pituitary gland and is indicated in women with irregular ovarian cycles.^{2,3} Both drugs are contraindicated in women with uncontrolled high blood pressure and both drugs are taken orally.³

Prevention of Premature Ovulation

- GnRH Antagonists (Antagon[®], Cetrotide[®]) work by suppressing the natural hormones LH and FSH. Cetrotide[®] is contraindicated if you have severe renal impairment. They are injected into fat tissue and usually given with hCG.³

Other Add-on Medications

- Progesterone is given in conjunction with assisted reproductive technology (ART). It is inserted vaginally 1-3 times per day for up to 10-12 weeks.³

References

1. American Pregnancy Association. Infertility Medications. <http://www.americanpregnancy.org/infertility/infertilitymedications.html>. Last updated May 2007 [Accessed 07 Nov 2011].
2. The Mayo Clinic. Infertility – Treatment and Drugs. <http://www.mayoclinic.com/health/infertility/DS00310/DSECTION=treatments-and-drugs>. Last updated 09 Sept 2011 [Accessed on 07 Nov 2011].
3. Micromedex 2.0 database accessed electronically through Campbell University Libraries. Accessed on 07 Nov 2011.