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## **HUMAN CHORIONIC GONADOTROPIN (HCG)**

**What is Human Chorionic Gonadotropin (HCG)?** HCG is one of the hormones produced by the human placenta during pregnancy. HCG is very similar in structure to Luteinizing Hormone (LH), which is one of the pituitary hormones responsible for stimulation of the ovary in normal ovulation. HCG is given by injection to stimulate final development and release of mature eggs at the time of ovulation during fertility treatment.

**Why is HCG used in fertility treatment?** Luteinizing hormone (LH) is responsible for the final stages of development of the human egg before release from the ovary. It is also considered the “trigger” which actually causes the egg to be ovulated or released from the ovary. Unfortunately, LH is difficult to isolate and purify as a compound. However, HCG has the same effect on the ovary as LH and is much easier to prepare and purify. So HCG is used to produce the final maturation and release of eggs at the time of ovulation. HCG is most often used to release eggs in clomiphene or gonadotropin (Pergonal/Humegon/Repronex/FSH) cycles or for final preparation of the eggs before retrieval in IVF or GIFT. HCG is also used to treat ovulation problems such as luteal phase defects as it stimulates better development of the corpus luteum (egg capsule) after release of the egg from the ovary.

**Are there any side effects of HCG?** HCG is actually the same hormone as is produced in normal pregnancy, and may cause temporary pregnancy symptoms in some women. These include mild nausea, fatigue, headaches, or weakness for 12-24 hours. These symptoms are usually not dramatic, and many women have no symptoms at all. Since HCG does stimulate the ovaries, it may increase the chance of ovarian cyst formation as is common with all fertility drugs.

**How do I use HCG?** HCG is given as an intramuscular (IM) injection into the buttocks area or as a subcutaneous injection under the abdominal skin. It may be given at different times of the day according to the specific program, but is often used in the evening and you will be instructed on the exact time for the injection. Some injections may be given at the office, but many patients will use HCG at home on their own.

To give the HCG injection, first pop the plastic tops off both the fluid and powder (HCG) bottles. Insert the needle through the rubber stopper into the fluid bottle and aspirate one (1.0) cc into the syringe. Remove the needle and re-insert it through the rubber stopper into the powder bottle. Inject the fluid (one cc) into the powder and shake gently. Turn the bottle upside down and aspirate all of the medication back into the syringe. There is a slit in the rubber stopper near the top of the bottle to help you see all the fluid as it is removed. Then change to a new needle, expel the extra air, and give the injection as instructed.