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The IVF Process ... explained

In general, the entire IVF process takes approximately two months once a decision is made to proceed. (Occasionally 3 months if freezing all embryos or doing genetic testing.) The first month ('preparation cycle') involves diagnostic tests and evaluations of the couple, consultations, and 'preparation' of the ovaries. The second month ('stimulation cycle') involves the actual hormone stimulation of the ovaries, monitoring with frequent blood tests and ultrasound (US) exams, retrieval of the eggs, followed 3 - 5 days later by the transfer of the embryo(s) into the uterus.

The couple starts with a thorough IVF consultation with me in order to discuss the entire IVF process (diagnostic evaluations, ovarian hormone stimulation, egg retrieval technique, anesthesia, embryo transfer, risks, benefits and costs). Optional techniques such as cryopreservation (vitrification) of extra embryos or all embryos and preimplantation genetic screening (PGS) are also outlined. Questions are then answered and reading materials and an *online IVF course* are provided to help the couple understand the process.

Preparation Cycle

The 'preparation cycle' then starts with the next menstrual period. On cycle day 2, 3 or 4 several endocrine and infectious disease labs are drawn. Some of these endocrine lab tests (Estrogen, Follicle Stimulating Hormone and AMH) indicate the woman's "ovarian reserve" of eggs and determine the medication dosage and IVF protocol to be used for stimulation of the ovaries the next month. The labs for the man can be drawn at any time. The woman is often then placed on oral contraceptive pills (OCPs) or estrogen & progesterone for the next several weeks in order to 'rest' the ovaries (by suppressing her pituitary hormones), making her more responsive to the fertility injections the following month. The uterine cavity is assessed for any abnormalities such as polyps, fibroids or adhesions (saline sonogram or office hysteroscopy) if it has not been checked within the previous 12 - 18 months. Next, an *IVF nurse consultation* takes place in order to help the couple understand the IVF process, schedule the actual IVF 'stimulation cycle,' sign consent forms and learn about injections. Depending on the IVF protocol selected, Lupron or Ganirelix injections will also be used in order to prevent spontaneous premature ovulation during the subsequent 'stimulation cycle.'

Stimulation Cycle

Upon finishing the OCPs, a period begins, signaling the start of the 'stimulation cycle'. The fertility drug injections are usually started on cycle day 2, 3 or 4 and are given for an average of 10 - 14 days. During stimulation there may be 6 - 8 office visits needed for labs and ultrasounds in order to monitor the size and number of egg follicles developing and Estrogen levels. The fertility medication dosages are adjusted accordingly. When several of the largest follicles reach a certain size (21+ mm), another hormone injection (hCG or Lupron) is given to mature the eggs (within the follicles) and the retrieval is scheduled 36 to 37 hours later. The egg retrieval is done transvaginally with ultrasound guidance under anesthesia (conscious sedation) and takes approximately 10 - 15 minutes. The eggs are fertilized with the sperm in the IVF embryology lab. The development of the fertilized eggs (embryos) is carefully monitored by the embryologists for several days. Depending on the number and quality of the embryos, one or more are transferred into the uterus 3 or 5 days later. Normal-appearing extra embryos may be cryopreserved (vitrified). *In some cases, if estrogen or progesterone levels become too high, we will recommend "freezing all" healthy embryos with transfer delayed until the following month, which will improve pregnancy rates.*