

## IVF Process ... explained

In general, the entire IVF process takes approximately two months once a decision is made to proceed. 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 embryos 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 of extra embryos and preimplantation genetic diagnosis (PGD) are also outlined. Questions are then answered and reading materials are provided to help the couple understand the process.

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 and Follicle Stimulating Hormone) 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 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, hysterosalpingogram or office hysteroscopy) if it has not been checked within the previous 12 - 18 months. Next, an IVF nurse coordinator consultation takes place in order to help the couple understand the IVF process, schedule the actual IVF 'stimulation cycle,' sign consent forms and schedule an injection teaching session. Depending on the IVF protocol selected, many women begin Lupron injections later in the month (approximately cycle day 21) in order to prevent spontaneous ovulation during the subsequent '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 - 12 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 a few of the largest follicles reach a certain size (19+ mm), another hormone injection (hCG) 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, some are transferred into the uterus 3 or 5 days later. Extra normal appearing embryos may be cryopreserved (vitrified). The woman is instructed to rest at home (couch potato) for 1 - 2 days. Two weeks after the embryo transfer a pregnancy test is done and a consultation is scheduled.

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