



AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

Formerly The American Fertility Society

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FACT SHEET

RISKS OF IN VITRO FERTILIZATION (IVF)

The medications and procedures required for in vitro fertilization (IVF) are rarely associated with complications. However, as with all medical treatments, there are potential problems which may occur.

1. Medication Risks

- a. Although mild bruising and soreness are possible with any injectable medications such as those used for IVF, allergic reactions are very rare.
- b. Ovarian hyperstimulation syndrome can occur whenever women use ovarian stimulation medications, especially injectable gonadotropins, such as Pergonal®, Metrodin®, or Humegon™. This complication occurs in less than 1 percent of women who have an egg (oocyte) retrieval with IVF. When severe, ovarian hyperstimulation can lead to dehydration, large amounts of fluid accumulation in the abdominal and lung cavities, blood clotting disorders, and kidney damage. Occasionally, IVF cycles are cancelled to prevent hyperstimulation.
- c. Controversial studies link ovarian stimulation drugs to the development of ovarian cancer. Although studies are contradictory, some researchers have reported an increase in borderline ovarian cancer in women who use injectable gonadotropins. Until further research is available, careful use of ovarian stimulation drugs is reasonable, but it is also important to note that achieving pregnancy reduces the lifetime risk of developing ovarian cancer.

2. Egg Retrieval

- a. Ultrasound-guided, transvaginal egg retrieval is a procedure whereby a long, thin needle is passed through the vagina into the ovary. Although women are under sedation or local anesthesia, this procedure can cause mild to moderate discomfort. Injuries during this procedure are extremely rare. Structures near the ovaries, such as the bladder, bowel, or blood vessels, could possibly be injured and require further surgery. Limited bleeding from the ovary may occur, but the need for transfusion is extremely rare. Infections following transvaginal egg retrieval are also possible but rare.
- b. Laparoscopic egg retrieval can be complicated by any of the surgical risks associated with laparoscopy. The risk of major injury to the bladder, bowel, uterus, blood vessels, or other pelvic structures occurs in approximately 1 in 500-1,000 surgeries. If injury occurs, further surgery may be required. Infection following laparoscopy rarely occurs. Anesthesia complications are rare in healthy women.

3. Embryo Transfer

The transfer of embryos may cause mild irritation to the cervix or uterus.

4. Pregnancy

- a. There is not an increased risk of birth defects in children conceived through IVF. The rate of pregnancy loss or miscarriage (about 20 percent) is similar to that of the general population and is related to the age of the female partner. The risk of ectopic (tubal) pregnancy is increased to about 5 percent (1 in 20 compared to about 1 in 80 in the general population). It is possible to have a pregnancy in both the fallopian tube and the uterus, although this is highly unusual.
- b. The risk of multiple gestation – twins, triplets, and higher order multiple pregnancies – is much more common in women who undergo IVF. The rate of twins with IVF is approximately 25 percent and the rate of triplets or more is approximately 5 percent. Multiple pregnancies are complicated by an increased risk of premature labor, premature delivery, maternal hemorrhage, cesarean delivery, pregnancy-induced high blood pressure, and gestational diabetes.

5. Stress

IVF is often considered to be one of the most stressful infertility treatments. To alleviate stress, patients should educate themselves about IVF; seek the support of family, friends, and professional counseling; learn and practice stress relaxation and meditation techniques; and take good care of their bodies through rest, exercise, and proper nutrition.