

THE FERTILITY CENTER OF OREGON

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EGG DONATION I.V.F.

What is egg donation IVF? Egg donation IVF is a recently developed procedure that can be used to treat certain kinds of infertility. In vitro fertilization (IVF) is the original procedure among the *Assisted Reproductive Technologies* (ART). IVF is sometimes called "the test-tube baby" procedure. In egg donation IVF, a woman who volunteers to be an egg donor for a recipient woman with infertility is given fertility medications to stimulate several eggs to develop at the same time in her ovaries. The eggs are recovered through the vagina from the ovaries at the time of a transvaginal ultrasound examination. These eggs and the sperm from the recipient's husband are combined in the laboratory, and embryos develop from fertilized eggs. Embryos are grown in the laboratory for 48 hours, and then 3-4 of the healthiest embryos are transferred back into the uterus of the recipient through the cervix in a procedure similar to intrauterine insemination (IUI).

When is egg donation IVF the best treatment option for a couple? Egg donation IVF is considered the best treatment choice for the following infertility conditions:

1. Women who no longer have healthy eggs because of premature ovarian failure (premature menopause), cancer treatment, or advancing age.
2. Women who no longer have menstrual periods because of menopause.
3. Women who have had their ovaries removed at surgery.
4. Couples with repeated failure at IVF with their own eggs despite normal sperm function.
5. Couples with a high risk of genetic disorders if the woman's own eggs are used.

Egg donation IVF can be performed even in the presence of extensive adhesions or scar tissue around the fallopian tubes, ovaries, and uterus. A woman must have a normal uterus to have a reasonable chance of success with egg donation IVF.

Who are the donors for egg donation IVF? Women who volunteer to donate eggs for the egg donation IVF program are young (generally less than 30 years old), healthy, non-smokers who are extensively screened for medical conditions which could be transmitted to the recipient woman or to a baby. They are often women who already have had at least one normal child. The donors are carefully evaluated for psychological as well as medical problems and are reimbursed for their participation in the program. Most donors tell us that they chose to participate in the program because they appreciate the joy that a child brings to a couple, and they wish to share this gift with someone else. Our program utilizes anonymous donors in order to protect both parties. Individual cases with a preferred known donor such as a sister are also considered.

How does egg donation IVF increase the chance of pregnancy? Egg donation IVF brings all the benefits of the regular IVF procedure together with the advantage of eggs from a fertile donor. Recent studies have demonstrated that the age of the eggs may be the single most important factor in the success of an IVF procedure. Since the rate of miscarriage and genetic problems increases with the age of the eggs, egg donation IVF is also associated with a lower risk of both of these problems.

How successful is egg donation IVF? The success rate (rate of live births) for egg donation IVF at most centers is significantly better than with the standard IVF procedure and appears to be about 40-50% per cycle when up to four embryos are transferred into the uterus. As with any of the ART procedures for the treatment of infertility, egg donation IVF can be an emotionally challenging process. In addition, the high level technology involved makes this type of treatment very expensive. However, for certain types of infertility, egg donation IVF can be a highly successful technique for the attempted achievement of pregnancy.

How is egg donation IVF done? The first step in egg donation IVF is evaluation of both the donors and recipients. In recipient women, this may include testing for any medical problems which would impair a healthy pregnancy or ability to care for a child. A donor is then matched to the recipient for physical characteristics such as height, weight, hair color, etc. The recipient must be "synchronized" to the donor so that her uterus is ready to accept embryos when they become fertilized. This is usually done by placing the recipient on a hormone replacement program to control her cycle. In the donor, ovulation is induced with ovulation-stimulating or fertility medications as for IVF. Ovulation induction for IVF results in the production of several eggs at the same time by the ovaries.

The donor is monitored as for standard IVF with estrogen blood tests and ultrasound examinations. When the eggs are mature, a transvaginal ultrasound examination is performed for retrieval of the eggs (called oocytes). A specially designed needle is inserted into the vagina along the ultrasound probe under local anesthesia to remove the eggs from the ovaries. The follicles are gently aspirated through the needle and the eggs are collected.

After the eggs are aspirated into test tubes, a laboratory specialist (embryologist) carefully examines the eggs for their maturity. The husband of the recipient is asked to collect a sperm sample about the same time as the IVF egg retrieval procedure. His sperm are then mixed in special Petri dishes (or "test-tubes") with the eggs from the donor in the IVF laboratory. The fertilized eggs (called embryos) are carefully grown in the special IVF laboratory for the next 48 hours. The recipient woman then returns to the clinic where 3-4 of the embryos are transferred through the cervix up into the uterus in a simple procedure. She then returns home to rest for 1-2 days and then can resume normal activities. In the several days following the IVF procedure, additional medication (called progesterone) is given to increase the chances of successful pregnancy occurring. All other embryos are frozen in liquid nitrogen (cryopreserved) and can be used at a later date by the recipient couple for additional attempts at pregnancy if desired.

Are there any risks or side effects of egg donation IVF? Egg donation IVF is actually safer and easier for the recipient woman than standard IVF. There is no risk of ovarian hyperstimulation or of an egg retrieval procedure. The number of office visits and procedures is also much less.

Of all IVF pregnancies, 25% may be multiple gestations with the large majority of these being twins. However, triplets or more can rarely occur with egg donation IVF, and may require consideration of multifetal pregnancy reduction to twins, etc. Ectopic (tubal) pregnancy occurs in about 3-4% of IVF pregnancies. The normal incidence of ectopic pregnancy is about 1-2%. This is a potentially serious disorder which may require surgery. All pregnancies in an IVF program are followed carefully in the first few weeks to watch for ectopic pregnancies. Miscarriages appear to occur in about 20% of IVF pregnancies.

Why is egg donation IVF so expensive? Egg donation IVF is expensive because of the highly specialized equipment required for an IVF laboratory and because of the large number of highly skilled people needed for this type of program. In addition, a large percentage of the cost may come from the fertility medication used in an IVF cycle. The donors are reimbursed for their participation in the program and the recipient fees must also cover all screening and recruiting costs for donors. Although this is a relatively new procedure, it is not considered research or experimental and there is no research funding or other outside support. The program must be supported entirely by fees paid by the recipient couples.

Are there any problems with pregnancy after egg donation IVF? If pregnancy does occur, you will be followed closely with blood tests and ultrasound examinations during the first 7-9 weeks. This is done in order to diagnose ectopic (tubal) pregnancy, multiple gestation, or other problems as early as possible. Once an IVF pregnancy reaches 10-12 weeks of gestation, it should be managed as any other routine pregnancy. Since the risk of genetic problems is relative to the age of the egg donor, genetic counseling and amniocentesis is not required for egg donation IVF pregnancies for indications of maternal age alone. After pregnancy becomes established, IVF pregnancies are not different from any other pregnancies for a woman of the same age and health.