In vitro fertilization (IVF)

In vitro fertilization (IVF) is a treatment procedure combining a woman's egg and a man's sperm outside the body, in-vitro ("in glass").

Normally, an egg and sperm are fertilized inside a woman's body. If the fertilized egg attaches to the lining of the womb and continues to grow, a baby is born about 9 months later. This process is called natural or unassisted conception.

The process involves monitoring and stimulating a woman's ovaries to produce several follicles

A minor surgery, called follicular aspiration, is done to remove the eggs from the woman's ovaries.

The man's sperm is placed together with the best quality eggs. The mixing of the sperm and egg is called insemination.

Eggs and sperm are then stored in an environmentally controlled chamber. The sperm most often enters (fertilizes) an egg a few hours after insemination.

If the doctor thinks the chance of fertilization is low, the sperm may be directly injected into the egg. This is called intracytoplasmic sperm injection (ICSI).

When the fertilized egg divides, it becomes an embryo. Laboratory staff will regularly check the embryo to make sure it is growing properly. Within about 5 days, a normal embryo has several cells that are actively dividing.

Embryos are placed into the woman's womb 3 to 5 days after egg retrieval and fertilization.

The procedure is done while the woman is awake. The doctor inserts a thin tube (catheter) containing the embryo into the woman's womb. If an embryo sticks to (implants) in the lining of the womb and grows, pregnancy results.

Indications for IVF

IVF is done to help a woman become pregnant. It is used to treat many causes of infertility, including:
Advanced age of the woman (advanced maternal age)

Damaged or blocked Fallopian tubes
Endometriosis
Male factor infertility, including decreased sperm count and blockage

Unexplained infertility

After Transfer

After embryo transfer, the woman may be told to rest for the remainder of the day. Most women return to normal activities the next day.

Women who undergo IVF must take daily shots or pills of the hormone progesterone for 8 to 10 weeks after the embryo transfer. Progesterone is a hormone produced naturally by the ovaries that prepares the lining of the uterus (womb) so that an embryo can attach. Progesterone also helps an implanted embryo grow and become established in the uterus. A woman may continue to take progesterone for 8 to 12 weeks after becoming pregnant. Too little progesterone during the early weeks of pregnancy may lead to miscarriage.

About 12 to 14 days after the embryo transfer, the woman will return to the clinic so that a pregnancy test can be done.

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