

Infertility

Fertility no more a Chance but a Science



Starting your family is one of the most exciting phases of life.

And one should know all the what's, how's, why's of getting pregnant. One out of seven couples may get difficulties in having natural pregnancy. Their best option is to seek doctor's advice after a certain period of trying to get pregnant. When looking for a doctor, you should look for fertility specialist (reproductive endocrinologist) not simply Gynecologist/ Obstetrician.

After one year

For age less than 30 years and trying for more than a year.

After six months

For Age group in mid 30's, seek advice after six months.

After three months

For Age over 40, seek advice after three months



The Basics

Now that you are planning to get pregnant, having a look about the reproductive system will help you to carry out discussions with your doctor. The following reproductive events occur in humans:

- Formation of eggs in females and sperms in males
- Transfer of sperms into female genital tract (insemination)
- Fusion of eggs and sperms (fertilization) to form zygote
- Development of embryo and eventually delivery of baby





Pregnancy Chances due to Age

Although there is no definite diagnosis for infertility, a common indicator of infertility can be the case when couples are having unprotected sex for over a year and yet unable to conceive. Woman's age plays most significant factor in infertility cases. A woman's peak fertility age is between 23 and 30 years, which

mean that most of the healthy women will conceive baby within first cycle of their trying. After 40 years of age, their odds of conception are 5% per cycle on average. For more than 70% of women over 30 years, their menstrual cycles are not regular.



The Basics Ovulation

During Ovulation phase, egg produced makes its way to the fallopian tubes where it can be fertilized by a sperm. This is the time when women are most fertile and the sperm has between 12 to 24 hours to fertilize the egg. If the egg is not fertilized, it will leave the body together with the lining of the uterus, which is when you get your period.



Infertility due to Medical Conditions

Polycystic ovary syndrome (PCOS)

One out of ten women are affected with PCOS, which leads to missed or irregular periods, high levels of male hormones and small cysts in ovaries. Certain PCOS symptoms are acne, excessive hair growth, weight gain and problems with ovulation. Fortunately, PCOS is treatable with fertility medications and surgery.

Endometriosis

It is probably the most common cause of unexplained infertility. Certain indicators like

painful menstruation, painful intercourse and pelvic pain. Endometriosis causes inflammation in and around uterus, which affects sperm-egg interactions and implantation. There is no cure for it at present time but its symptoms can be treated.

Thyroid Imbalance

Thyroid problem is simplest to evaluate but very vital because rise in thyroid-stimulating hormone (TSH) levels in the first trimester is associated with miscarriage.



Male Infertility

When considering for infertility problems, male infertility should also be checked because almost half of all explained infertility cases come from male infertility. About 30-40 percent male infertility arises due to testicles like dilated veins, blockages of the reproductive tracts, or physical damage. 40-50 percent of the male infertility cases remain unexplained.

One major test for men infertility is semen analysis. This analysis provides information on the sperm count, sperm motility, shape of the sperm, as well as the volume and concentration of the semen.

Infertility Treatments

Medications

Usually clomiphene is prescribed, which is taken orally between 3-5 days of menstrual cycle. Clomiphene causes the release of hormones, which help the eggs to mature inside ovaries. Generally 40% is the success rate. Hormone injections can also be prescribed.



Assisted Reproductive Technology

According to CDC, “ART procedures involve surgically removing eggs from a woman’s ovaries, combining them with sperm in the laboratory, and returning them to the woman’s body or donating them to another woman”.



a. Insemination

Technically not included in ART group, artificial insemination includes washing semen from father or donor, separating sperm cells from other semen components. The sperm is then placed into woman’s cervix or uterine cavity. Chances of conception, with this method is around 10%



b. In Vitro Fertilization

IVF is the most commonly performed ART procedure in which egg and sperm are combined outside body in a laboratory and fertilized egg (or embryo) is implanted into woman’s uterus. Odds of conception are 20-35 % for first cycle of IVF.

c. Surrogacy

Surrogacy is a case when another woman carries and grows your embryo to term and gives birth to your baby.

Complications in Pregnancy

High-risk pregnancies

Ectopic pregnancy

When the fertilized egg attaches itself in a place other than inside the uterus, it leads to ectopic pregnancy. Mostly, it occurs in fallopian tubes leading to abnormal development of embryo. It is also dangerous for women's health as it might cause rupture of fallopian tubes. An ectopic pregnancy happens in 1 out of 50 pregnancies.



Heterotopic pregnancy

Heterotopic pregnancy is a dangerous condition when a woman gets pregnant normally, with a fertilized egg in her uterus, but there is also another fertilized egg outside her uterus mostly in one of the fallopian tube. This type of pregnancy is rare in natural conception and tends to happen more in assisted fertilization like in case of IVF. 1 to 2 pregnancies out of 1000 following fertility treatments may lead to heterotopic pregnancy.

Other cases of high-risk pregnancy

Age is the most crucial factor leading to problems. Teen pregnancy or first-time pregnancy after age 35 may lead to complications - prolonged labor, cesarean delivery, delivery complications, preeclampsia, anemia, etc. Other factors could be uncontrolled high blood pressure, diabetes, kidney disease, sickle cell anemia, thyroid

disease, obesity, and HIV/AIDS.

Miscarriages

Losing a pregnancy (loss of an embryo or fetus before it's developed enough to survive) is emotionally painful and heartbreaking but unfortunately, it is quite common. This often happens even before a woman is aware that she is pregnant. On average, about 1 in 5 pregnancies end up in miscarriage, usually in first trimester. Experiencing a miscarriage can cause a lot of mental trouble for couples and they might become hesitant about trying for future pregnancies.

Symptoms of miscarriages are cramping, spotting, heavier bleeding, abdominal pain, pelvic pain, weakness, or back pain. Many women think that these symptoms might be occurring due to heavy menstrual flow (since they might be unaware of their pregnancy).

