

Causes of Infertility

About one third of the time infertility is caused by female factors, one third of the time by male factors, and one third of the time by both, or by factors that are unexplained. In about 15 per cent of couples, doctors cannot be sure about the cause of infertility.

Female Factor

Age-related Infertility- A woman's fertility declines as she ages because both the quality and the quantity of her eggs gradually decline.

Unlike a man, who continues to produce sperm throughout his life, a woman is born with all the egg-containing follicles in her ovaries that she will ever have. Only about 300 will be ovulated during her reproductive years, which naturally come to an end about five years before menopause. The gradual decrease in number of follicles remaining is called "loss of ovarian reserve." The more eggs a woman has left, the better her chance of getting pregnant. Low ovarian reserve can make it difficult to get pregnant – even with treatment.

Egg quality decreases as the number of remaining eggs decreases. Also, as a woman gets older, more of her eggs may have genetic abnormalities such as too many chromosomes. If one of these eggs is fertilized, the embryo also will have an extra chromosome. *Down Syndrome* is an example of a condition that results when the embryo has an extra chromosome. Most embryos with this kind of abnormality do not result in pregnancy at all, or result in miscarriage. This is one of the reasons for the lower chance of pregnancy and higher chance of miscarriage in older women.

Tubal Factor Infertility – The fallopian tubes are very important to the reproductive process. If eggs or sperm are blocked from the fallopian tube, then fertilization can't occur. The most common cause of blockage or damage is scar tissue.

Abnormal Ovulation – Ovulation is the monthly release of an egg by the ovary. Some women do not ovulate at all, or ovulate infrequently, resulting in irregular periods and infertility.

Male Factor

Impaired sperm production – Most male infertility is due to problems with sperm number or quality.

- Decreased number of sperm – Up to 20% of men have a low sperm count, defined as fewer than 15 million sperm per millilitre of semen.
- Decreased sperm motility – At least 40% of sperm need to be progressively mobile (swimming forward) in order to reach the egg
- Abnormal sperm – sperm can sometimes be an abnormal shape, making it harder for them to move and fertilize an egg
- Absence of sperm in the semen due to
 - a hormonal problem: the testes are not getting the hormone signal to make sperm
 - one of the tiny tubes in the reproductive tract is blocked, which this stops sperm getting from the testes into the semen
 - the testicle is unable to make sperm

Ejaculation disorders - Some men experience problems that can make it difficult for them to ejaculate sperm outside the body.

Age – Age-related sperm quality generally does not become a problem before a man is in his 60s.