



## **CAUSES AND PREVENTION OF INFERTILITY IN WOMEN AND MODERN METHODS OF PREGNANCY MANAGEMENT**

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<b>Article history:</b>	<b>Abstract:</b>
<b>Received:</b> March 24 <sup>th</sup> 2025 <b>Accepted:</b> April 20 <sup>th</sup> 2025	This article examines the main causes of female infertility, including hormonal, anatomical, genetic, and immunological factors. It discusses diagnostic methods for reproductive disorders and modern treatment approaches such as medication and assisted reproductive technologies. Special attention is given to infertility prevention, including timely treatment of gynecological diseases and maintaining a healthy lifestyle. The second part of the article focuses on current methods of pregnancy management aimed at ensuring the health of both mother and fetus
<b>Keywords:</b> infertility, women's health, reproductive system, prevention, hormonal disorders, pregnancy management, assisted reproductive technologies, diagnostics, gynecology, obstetrics, in vitro fertilization (IVF), assisted reproductive technologies (ART).	

According to statistics, approximately 15% of married couples worldwide suffer from infertility. In Uzbekistan, this figure is about 5.7% (about 200 thousand couples), and in Russia - from 8 to 19%. Infertility is one of the most serious medical and social problems in marriage. Due to the need for artificial insemination procedures, many married couples were forced to seek treatment in foreign clinics - in Kazakhstan, Turkey, Russia, India, Israel and other countries, spending significant amounts - from 3 to 15 thousand dollars. According to a number of studies conducted in Uzbekistan, the proportion of women suffering from primary infertility among those who have entered into marriage is from 4.9% to 5.3%. The absence of pregnancy for one year with regular sexual activity without the use of contraception may indicate infertility caused by disorders in the reproductive system. Diagnostics and treatment of infertility remain the most important tasks of modern medicine and require a systematic approach at the state level [1,4,11,13,17]. Previously, it was believed that the cause of infertility in marriage is mainly women, but modern data indicate otherwise. According to statistics, in 10-15% of cases, infertility is associated with both partners, and in 30% - exclusively with the man.

There are four forms of female infertility:

1. Primary infertility - there is no history of pregnancy.
2. Secondary infertility - there was a pregnancy in the past, but conception is currently impossible.
3. Absolute infertility - pregnancy is impossible for anatomical reasons (absence of the uterus, ovaries, fallopian tubes, etc.).
4. Relative infertility - associated with the male factor.

The main factors of infertility:

1. Pathology of the fallopian tubes.

2. Ovulation disorders.
3. Immunological infertility.

In addition, they distinguish:

- The male factor (40% of cases) - includes sexual and ejaculatory dysfunctions, infections of the gonads, varicocele, as well as idiopathic forms of spermatogenesis disorders (oligozoospermia, asthenozoospermia, teratozoospermia).
- Female factor.
- A combined factor - when violations are present in both spouses.

Among other causes of infertility, systemic diseases, immunological disorders, congenital and acquired abnormalities of the genital organs, genetic defects and endocrine disorders are also found. In order to determine the infertility in men, we need to collect information about the medical history, the living conditions of the patient, the diseases he had suffered, possible infections, egg injuries, surgical interventions, as well as the use of drugs with one word collection of an anamnesis [2,5,6,9,15].

When collecting an anamnesis, a special emphasis is on the identification of diseases of the transmitted transmitted, as well as ejaculatory dysfunction and sexual signs, too, using them, we can determine the cause of infertility and the diagram of further examination diagnostics and treatment. As mentioned above, according to the statistics of infertility, the male factor is about 40% and the female approximately 45% there are many causes of female infertility, they can be associated with hormonal disorders, endometriosis, inflammatory processes and anatomical abnormalities in addition to the above cause of genital tuberculosis of



various systemic diseases and outcome of medical intervention and in separate In cases, the cause of infertility remains indefinite. Infertility in women is divided into primary and secondary, depending on the moment of appearance. Primary infertility is when the pregnancy has not occurred from the beginning of sexual activity and the secondary is when conception has already happened at least once regardless of the result. According to forecast, it is classified into absolute and relative infertility. With improper development, underdevelopment or complete absence of the organs of the reproductive system, which can cause infertility, the forecast is considered absolute. The chance of pregnancy, preserved after treatment - drug or surgical, is called a relative forecast. And the last factor is a combined one which is 15%. Thanks to modern medical methods of diagnosis and therapeutic technologies, it is possible to accurately identify functional disorders of the reproductive system and select the most suitable treatment tactics for each woman [3,8,10,14,16].

Treatment of infertility includes:

1. Therapy of the tube - peritoneal factor;
2. Restoration of ovulation;
3. Treatment of immunological infertility (efficiency up to 40%);
4. The use of auxiliary reproductive technologies (ART) (efficiency is up to 35%).

Auxiliary reproductive technologies (ART) are approaches to the treatment of infertility, in which the initial stages of fertilization and embryonic development occur outside the female body.

The main types of ART include:

- IVF (extracorporeal fertilization), used since 1978;
- ICSI (intracytoplasmic injection of sperm);
- PE (transfer of embryos to the uterine cavity);
- surrogate motherhood, etc.

In Uzbekistan, the VTR began to be officially used since 2019 (PP No. 4513 dated 08.11.2019).

The purpose of the CBT is the birth of a healthy child in barren couples. Today, these technologies are becoming more and more in demand for violations of fertility. Most women turning to IVF suffer from severe reproductive disorders. Their body is often not able to take pregnancy on its own. That is why from 22 to 44% of natural pregnancies end in failure. The level of spontaneous miscarriages depends on the age:

- up to 35 years- 10.5%;
- from 35 to 39 years- 16.1%;
- over 40 years old- 42.9%.

Also, a high risk is associated with the cause of infertility. Filumen was the first to convert and noted that one of the causes of infertility may be infection of the vagina and uterus, he proposed a surgical method

of treating this pathology. Infectious pathologies in pregnant women occupy an important place among the causes of perinatal incidence and mortality. They do not always directly affect the fetus, but they can penetrate with a decrease in the body's protective barriers. Such infections include mycoplasmosis, ureaplasmosis, chlamydia that are transmitted sexually and can cause female infertility [4,5,9]. In addition to them, the gonorrhea, syphilis, candidiasis, as well as a violation in the thyroid gland (thyroid gland) are significant. According to statistics in women with thyroid diseases in 15-40%, malfunctions occur in the cycle (normally the cycle before and from 21-35 days, and bleeding 3-7 days). With a reduced function of the thyroid gland (hypothyroidism), menstruation delays from 5 to 30 days or more are possible. With increased activity (hyperthyroidism), the cycle can shorten up to 18-24 days. Sometimes there is an immunological form of infertility, when a woman's body produces antibodies against sperm, that is, a woman's body blocks spermatozoa, they destroy it or with immobilization of a sperm. The fetal infection can occur through the placenta from the mother to the fetus this method is called the Placentan means (hematogenically), in addition, there are still rising paths (from the vagina through the cervix to the fetus) and the latter is through amniotic fluid, when the infection penetrates through the skin, respiratory tract, eyes, ears, umbilical cord and gastrointestinal tract. The cessation of gestation, that is, pregnancy, regardless of the term, may be accompanied by adverse consequences and complications, which is difficult to predict and prevent the most common of them are the inflammatory processes of the pelvic organs, impaired reproductive function, disorders of the menstrual cycle, as well as the development of the development of secondary infertility. Medical experts are required to explain and inform women, especially those who have not yet had a birth who has never gave birth to negative and adverse consequences of abortion. Abortion is understood to mean deliberate medical intervention aimed at completing pregnancy. According to the current clinical protocols, the procedure is carried out until the 20th week of gestation or with a fruit weight of less than 400 grams if the gestational age is not known. According to epidemiological data, a miscarriage is diagnosed in 15–20% of planned gestations. The fetus in conditions of intrauterine infection can be exposed to various pathological influences: death, premature birth, the formation of congenital defects, the development of acute or chronic infectious diseases, or not to have clinically expressed changes [7,12,18,19]. For the prevention of female



infertility, it is important from an early age to pay attention to the state of the reproductive system. One of the key aspects is the control of the hormonal background, in particular, a regular assessment of the function of the thyroid gland and ovaries. Thus, timely detection and treatment of infections that transmit sexually also play an important role in maintaining fertility. Maintaining a normal body mass index contributes to the optimal operation of the hormonal system and reproductive organs. If possible, abortion should be avoided, as they can lead to inflammatory processes and violation of the structure of the uterus. The optimal age for conception is a period of 20 to 30 years, when the woman's body is physiologically the most ready for gestation. Superable factors are a decrease in stress, rejection of bad habits (such as smoking, drinking alcohol and narcotic substances), as well as a balanced diet. In addition, it is necessary to regularly undergo preventive medical examinations for the early detection of possible violations.

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