



**A tiny voice of
a new life, a big hope.**

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A tiny voice of a new life, a big hope.

Medicana International Istanbul Hospital offers high-quality health care for everyone with experienced staff of IVF Center and high-tech medical infrastructure. Today, with the introduction of assisted reproductive techniques, many couples experiencing problems on this issue may now have a child.

We offer scientific solutions to spouses who wish to become family with our experienced team consisting of obstetrics and gynecology specialists, andrology (male infertility) specialists, embryologists, medical genetics specialists, psychologists, biologists, and nurses and our strong infrastructure. All kinds of diagnosis and treatment, as well as psychological support are provided to the couples by a specialist psychologist.

What is infertility? When should be treated?

Infertility is defined the Inability to conceive a child despite having regular and unprotected sexual intercourse for one year. It affects about 25 percent of all women at some time during their lives.

The rate of male, female, and both male and female causes for infertility ranges from 25 to 40%, 40 to 55%, and 10 to 15%. Respectively, whereas the rate of infertility of unknown etiology

varies between 10 and 15% in other words, infertility is the common problem of couples. The goal is to find a solution to this problem and to achieve a pregnancy with the treatment. Evaluation of men and women begins at the end of one year, and if necessary, treatment is commented.

How to assess the status of couples prior to treatment?

It is possible to reveal some of causes early by a detailed interview with and examination of couples. Following this meeting, basic investigations are initiated. Sperm analysis (spermiogram or semen analysis) is performed in order to assess male fertility. The sperm sample is given by masturbation after 3 to 5 days at sexual abstinence. Sperm motility, count, viability rate and patterns are examined.



It is not appropriate to establish the diagnosis of male infertility with only one sperm analysis showing abnormal findings. As the results of sperm analysis may vary, this analysis should be repeated at least twice at 4 to 6 week intervals in case of an abnormality. For the assessment of female fertility, the uterus and tubes is evaluated by a radiographic examination (HSG). If both tubes are observed to be occluded, it is not possible for sperms to fertilize the egg passing through these tubes. If a problem is detected in radiographic evaluation, the intraabdominal examination process which is called as laparoscopy is conducted in order to understand whether the tubes are really occluded. If the tubes are occluded. They are repaired with surgery, whereas in-vitro fertilization process should be applied if reparation is not possible.

The problems related to the tubes generate a significant proportion of causes of female infertility IVF treatment should be started immediately if this problem seems to be insurmountable by surgery. The vast majority of women who have irregular menstrual periods have ovulatory dysfunction. It is determined whether women have ovulatory problems by hormone assays and ultrasound follow-up and the necessary treatments are commenced.

What is in vitro fertilization treatment in brief? What to expect during treatment?

In vitro fertilization is the treatment modality that is applied in couples diagnosed with infertility,

in which the egg cells produced in the female body are taken out of the body with special needles and fertilized with man's sperm cells in the laboratory conditions, and the resulting embryos are transferred into the woman's uterus. The treatment is usually initiated after the examination in the second or third day of menstruation if no obstacles are detected. The growth of eggs is provided by the daily injections and this growth is followed by ultrasound checks performed every two to three days. The growth is also monitored with hormone levels in the blood if necessary.

This process can take up to 8 to 10 days an average, if the growth is found to be adequate at the end of this period. The eggs are provided to reach the final maturity by doing cracking injection, and the eggs are collected under anesthesia after approximately 35 hours without cracking.





Man's sperm sample is taken on the same day, but if the man's sperm sample cannot be obtained through masturbation, that is if there is very few or no sperm in the example given. sperms may well need to be taken surgically (TESE or MicroTESE), Male sperm cells and female egg cells are placed side by side in a suitable medium at body temperature (conventional in vitro fertilization) or sperms are placed in to the eggs with microinjection method. During this period, fertilization occurs in approximately 80% of the eggs obtained. The fertilized eggs are called as embryo (fetus)

and the health and quality of eggs are evaluated by monitoring in the laboratory for 2 to 3 days. At the end of this period, healthy-looking embryos are placed into the woman's uterus with a thin catheter. Approximately 11 days after the transfer, the blood pregnancy test is conducted. Approximately 50% of women achieve a pregnancy as a result of this process. If there are any other healthy-looking embryos other than the embryos transferred (usually 2 or 3), they are stored frozen with the consent of the couple. There is a similar pregnancy rates with an easier treatment process through the transfer of frozen embryos.

Which methods are used for in vitro fertilization?

In assisted reproductive techniques, conventional IVF (in-vitro fertilization IVF), which means putting sperm and egg cells in the same environment and microinjection also known as intracytoplasmic sperm injection (ICSI) are applied. The only difference between IVF and ICSI is the form of fertilization of the egg cells. Microinjection (ICSI) represents the most extreme point reached in assisted reproductive techniques. With this application, the chance of being cured of male infertility has significantly improved and new perspectives have been attained.

What processes are applied in IVF center of Medicana International Istanbul Hospital?

- Induction of ovulation (ovulation monitoring and treatment)
- Insemination (artificial insemination)
- Infertility surgery.
- Endoscopy (non-invasive surgical applications)

a) Laparoscopy (intraabdominal examination, endometriosis surgery, removal of myomas, removal of adhesions, ovarian cysts surgery)

b) Hysteroscopy (Intrauterine examination, polyp removal, elimination of intra-uterine compartments, removal of myomas, removal of adhesions)

- Hysterosalpingograph - HSG (uterine radiography)
- Saline infusion sonography (intrauterine examination with fluid and ultrasound)

Laboratory procedures:

- Spermogram (sperm analysis)
- Morphological evaluation of the sperm (shape analysis)
- Sperm DNA fragmentation (damage) analysis
- In vitro fertilization (IVF)
- Microinjection (ICSI)
- Embryo culture in the early and blastocyst periods
- Prepregnancy genetic diagnosis - PGD (screening of abnormalities, single gene disorders)
- TESE-Micro-dissection TESE (Micro-TESE testicular sperm retrieval)
- Embryo freezing/thawing
- Embryo freezing/thawing by verification method
- Laser-shaved thinning method of embryonic membrane (assisted nesting)
- Endometrial Co-culture (application of artificial uterus)



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