PRONATAL

Member of MEDICON Group

Where Life Begins

Since 1996, we have been helping you make your dream of having your own child come true

www.pronatal.cz/en

About Pronatal

We have been treating infertility for over 25 years. We run 7 assisted reproduction centres in the Czech Republic, 4 abroad, and our own genetic laboratory. We have opened a prenatal diagnostics centre in Prague to ensure you and your baby are safe.

PRONATAL was founded in 1996. Since then, we have helped thousands of babies to enter this world. Since 2016, we have been a member of the MEDICON group, one of the largest operators of outpatient facilities in Prague. We currently have over 400 employees who perform more than 7,451 cycles yearly.

Nicole Vraná-Mardešić, M.D., MHA, Head of PRONATAL Group

Nicole Vraná-Mardešić, MD, graduated from the 1st Faculty of Medicine at Charles University in Prague. She has specialised competence in gynaecology and obstetrics and certification in Reproductive Medicine. She is currently completing her Master of Healthcare Administration. Since 2008, she has worked as a doctor at the Institute for Mother and Child Care, and since 2016, she has been a member of the doctoral team of Sanatorium PRONATAL. Currently, she is the PRONATAL Group's leading physician. She is a member of professional societies CGPS (Czech Society of Gynaecology and Obstetrics), SAR (Assisted Reproduction Section), and ESHRE (European Society of Human Reproduction and Embryology). She participates passively and actively in European congresses.

Assisted Reproduction Methods

At the beginning of your treatment, we will perform all the necessary examinations to help discover the causes of infertility. Depending on the type of causes, we proceed with the treatment from the simplest methods to the most demanding.

IUI

Intrauterine Insemination

Intrauterine insemination (IUI) is the simplest method of assisted reproduction. IUI will help the sperm get to the egg more easily. This means that a doctor will introduce sperm into the uterus using a plastic catheter during the most fertile day of a woman's cycle. This method doesn't hurt, takes only a few minutes and is fully covered by health insurance.

IVF

In Vitro Fertilisation

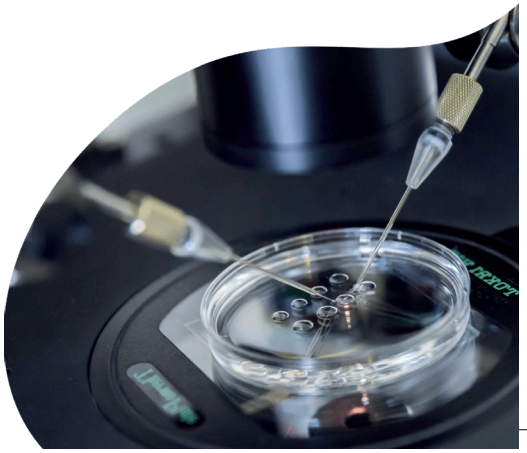
IVF is a method of assisted reproduction in which eggs are fertilised with sperm outside the woman's body under laboratory conditions (in vitro). First, it is necessary to remove the eggs after prior hormonal stimulation. The eggs are then fertilised in the laboratory with the partner's sperm. After a few days, the resulting embryo is inserted into the patient's uterus. The IVF method is covered by health insurance only under certain conditions.

IVF

IVF with Donor Cells

If pregnancy cannot be achieved with our own cells, we use sex cells (sperm and eggs) from our donors. In the Czech Republic, egg and sperm donation is legal, voluntary, safe and based on the principle of anonymity. This method is also covered by health insurance only under certain conditions.

„We are your responsible, reliable and empathetic partner in infertility treatment."
Nicole Vraná-Mardešić, M.D., MHA



How Artificial Insemination Is Performed

If the discovered cause of infertility cannot be treated or eliminated, assisted reproduction or artificial insemination comes into play.

Initial interview

Examination of the man

Examination of the woman

Egg stimulation

Sperm collection

Egg collection

special laboratory methods

These methods increase the likelihood of pregnancy. These methods include ICSI, PICSI, Microfluidic Sperm Sorting, EmbryoGlue and others. Superior methods are not yet covered by health insurance.

ICSI/PICSI

Culture

Embryotransfer

Your baby

* If it is impossible to achieve pregnancy with our own cells, we use cells from our donors. Donation of eggs and sperm is legal, voluntary, safe and anonymous in the Czech Republic.

IVF with Donor Cells

If it is impossible to achieve pregnancy with our own cells, we use sex cells from our donors. Donation of eggs and sperm is legal, voluntary, safe and anonymous in the Czech Republic. The success rate of cycles with donated cells is very high. Its results rank among the most successful methods. All female donors are carefully selected, and all of them undergo legally required examinations. All of them are healthy women between age 18 and 33, with regular menstrual cycles and average weight. There are no psychiatric or hereditary diseases in the donors' families. The same is true for the male donors, who also undergo various tests and examinations.

IVF Procedure with Donated Eggs

01 Initial consultation with the doctor - The doctor will first provide all the information about the program's course. He listens to the wishes and requirements regarding the female donor and the eggs.

02 Finding a suitable donor - It takes 1 to 2 months to find a suitable donor. We usually look for a donor who resembles the patient. Our selection is based on characteristics such as eye colour, hair colour, height, weight, blood type and Rh factor.

03 Synchronisation of the donor and recipient cycles - Once we have found a suitable female donor, we arrange a date for the start of stimulation. When scheduling the date, we must follow her menstrual cycle. At the same time, we contact the recipient, provide basic information about the donor, and agree on a date for the start of stimulation. The doctor will adjust the recipient's cycle with medication. After 10 to 14 days of stimulation, the recipient must come to the clinic so that we can check the height of the uterine lining by ultrasound. By synchronising the cycle with the donor, the uterine lining will be in the best condition to receive the embryo on the day of the embryo transfer.

04 Egg retrieval and fertilisation - If we do not have the partner's sperm frozen, they will arrive at the clinic on the day of egg retrieval to submit an ejaculate sample. We will fertilise all eggs obtained from the donor immediately after collection, usually using the ICSI or PICSI method. This is followed by several days of embryo cultivation in an incubator.

05 Embryotransfer - As a rule, after 5 days of cultivation, we select the embryos that have developed the best. We transfer one into the uterus with a thin set through the cervix. The procedure is not painful. In the first few days after the transfer, EmbryoGlue will help keep the embryo in the uterus, giving it the nutrients it needs to develop. We freeze the remaining healthy embryos so that we can use them in the future if necessary.

IVF Procedure with Donated Sperm

The procedure is the same as for conventional IVF, but we use donor sperm to fertilise the egg.

Specific Laboratory Methods

At the beginning of your treatment, we will perform all the necessary examinations to help discover the causes of infertility. Depending on the type of causes, we progress from the simplest methods to the most complex.

TESE is a microsurgical procedure we use to extract sperm directly from the testicular tissue. The procedure is performed by a urologist under general anaesthesia and is not covered by health insurance. A small incision is made in the scrotal area from where the testicular tissue is obtained.

MESA is a microsurgical procedure in which we extract sperm from the ducts of the epididymis through a 15 mm long incision. The procedure is performed by a urologist under general anaesthesia and is not covered by health insurance.

ICSI is a micromanipulation method of fertilising an egg, where we insert the sperm with a microneedle directly into the egg's cytoplasm. This way, we fertilise most of the eggs during ectopic fertilisation, as the conventional method of adding sperm to the eggs can always result in total fertilisation failure, even if natural conception has previously occurred. The ICSI method has a fertilisation success rate of more than 95%.

PICSI is a microscopic method of transferring specially selected sperm into an egg. In the laboratory, we choose a mature and viable sperm and insert it with a microneedle directly into the cytoplasm of the prepared eggs using the ICSI method. This method has a 95% fertilisation success rate.

Prenatal Diagnostics

All expectant parents long for their baby to be born healthy. Modern prenatal diagnosis methods help us discover many congenital disabilities during pregnancy. Any developmental defects or health problems related to pregnancy can thus be detected and addressed early on.

Embryo Monitoring

Embryo monitoring directly records embryo development in a special incubator with a built-in camera. In this way, we obtain detailed information about the development of the embryos while the embryos are in optimal conditions, without the need to remove the culture dishes to check the result. This is the safest way of culturing; there are no fluctuations in the temperature or composition of the medium. Detailed developmental information helps us select embryos with the highest chance of success. Compared to culturing in conventional incubators, more high-quality embryos develop here, thus speeding up the path to childbirth.

„The IVF lab is the heart of the clinic.
It's where new life is created."
MVDr. Ladislava Jelínková, CSc.

Reproductive Cell Donation

By donating your reproductive cells (eggs or sperm), you can help couples where one or both partners suffer from a reproductive disorder, have a serious genetic disease or have undergone cancer treatment.

In the Czech Republic, egg and sperm donation is based on the principle of anonymity between the he-donor, the she-donor, the recipient of the donated sex cells and the child born from the donated eggs or sperm.

Assisted Hatching

Assisted hatching is a microscopic technique that facilitates opening the embryo's protective envelope. The embryo envelope is cut with a very fine microneedle or laser just before transfer to the uterus.

Extended Cultivation

Extended cultivation lasts 5 to 6 days and has much better results than a shortened cultivation of 2 to 3 days.

Up to 30-50% of embryos that develop properly at first stop developing later because only a minority of embryos can develop to birth. Such natural selection exists even at standard conception, and women often do not even notice that fertilisation of the egg and several days of embryo development have taken place. Already in the first 5 days of cultivation, it is evident that some embryos have no chance for further development and that the cells do not divide any more. Therefore, after 5 days, we retrieve only those embryos with a high probability of nesting in the uterus, thus avoiding many disappointing unsuccessful transfers.

EmbryoGlue

EmbryoGlue is a unique medium that contains hyaluronan, albumin, carbohydrates and amino acids. The most essential ingredient is hyaluronan, which ensures the first attachment of the embryo to the uterine wall. After that, the embryo will more easily nest in the uterus. EmbryoGlue can mimic the environment that exists in the uterus during natural embryo settlement. The active ingredients also protect and nourish the embryo. EmbryoGlue has been shown to increase the chance of pregnancy by 7-10%.

ERA Test

The ERA test (Endometrial Receptivity Analysis) is a diagnostic test designed to examine the receptivity of the uterine lining (called the endometrium). It is an exact tool for examining the uterine lining, especially for women with repeated failure of embryo implantation. It is performed by analysing a sample of endometrium obtained by biopsy, which is then evaluated by genetic analysis for its receptivity, i.e., the time when the endometrium is ready for embryo implantation (nesting).

„Thanks to the work of our clients,
over 1500 babies are born every year."
Mgr. Richard Honner

Social freezing

Social freezing is the precautionary freezing of your own eggs or sperm for future use. In the civilised world today, social freezing is a common practice.

Egg Freezing

A woman is most fertile between the ages of 20 and 30. After the age of 35, the quality of eggs decreases significantly. By the age of 40, about 20% of women are pregnant without problems. For a woman to be able to have a child of her own at an older age, it is recommended to freeze the eggs ideally until the age of 30 and, at most, until the age of 35. Of course, a woman can always try to conceive naturally without using frozen eggs.

Freezing eggs is suitable for women who

- have to postpone their motherhood for various reasons,
- are awaiting cancer treatment,
- will have their ovaries removed due to medical reasons

Sperm Freezing

It is possible to have your sperm frozen at any age, but the number of sperm and their quality decreases as you age.

Sperm freezing is suitable for men who

- are in environments with elevated levels of harmful substances,
- play high-risk sports or serve in the military,
- are delaying parenthood,
- are awaiting cancer treatment

PGT – Pre-implantation Genetic Testing

This diagnostic step is used to find those embryos that do not carry a chromosomal change or are not affected by a hereditary disease carried by one or both parents and are, therefore, suitable for transfer to the uterus. This minimises the risk of a sick baby being born.

Possibilities of embryo pre-implantation genetic testing:

PGTA-A (preimplantation genetic testing for aneuploidy) to rule out chromosomal abnormalities in the number of chromosomes

PGT-SR (preimplantation genetic testing for structural rearrangements) to rule out chromosomal rearrangements (e.g. translocations) that have been detected in one of the parents (rarely both) during preconception testing

PGT-M (preimplantation genetic testing for monogenic diseases) to exclude inherited diseases with a known genetic cause (both parents are carriers of the pathological trait, or one parent suffers from the disease); such conditions include, for example, cystic fibrosis, haemophilia, spinal muscular atrophy, muscular dystrophy, etc.

PGT Procedure

For genetic analysis, we usually take a few cells from the embryo on the fifth day after fertilisation for examination in the genetic laboratory. We examine the embryonic DNA from the collected cells and use the results to determine the embryo's future fate. Only embryos with no chromosomal abnormalities and no risk of a specific hereditary disease are intended for transfer to the uterus.

„We do everything we can to ensure your baby is born healthy. Genetic testing of embryos can optimise treatment and prevent the birth of an affected baby."
RNDr. Marcela Kosařová, Ph.D.

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