



IVF with donor embryos

Part of the Treatment Guide series of brochures



Attention:

The information provided in this brochure should not be used as a substitute for information or advice provided by a doctor. Your doctor can help you choose the best option for you.

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Introduction

The first successful pregnancy resulting from frozen embryos happened more than twenty years ago in Australia. The ability to successfully freeze and then thaw embryos opened up a number of options that allowed couples to store embryos for later use.

Embryo donation is a method of assisted reproduction in which one or more embryos created in an embryology laboratory are transferred to a woman's uterus. Embryos are selected based on the requirements of the recipients. Embryos specifically created for donation purposes come from eggs and sperm from vetted anonymous donors. The use of donor embryos may be the only option for couples in which both partners are infertile.

Embryo donation is a relatively simple medical procedure, but it can be very emotionally challenging.

Who is this treatment recommended for?

In vitro fertilisation is the joining of an egg and sperm outside a woman's body. For couples who are unable to conceive naturally, donated eggs and sperm from suitable anonymous donors are used.



Who are embryo donors?

At Europe IVF, we exclusively use our own database of young donors. We do not buy eggs or sperm. All our donors are evaluated and screened according to the safety standards and selection requirements stipulated by law.

We have one of the largest databases of frozen eggs, sperm and embryos in the Czech Republic.

We adhere to the highest ethical standards, provide comprehensive fertility services

and offer an open environment for assisted reproductive technology.

Our clinic has an extensive database of active female donors (i.e. donors that can start hormonal stimulation right away), so you don't have to wait for a donor. We also have a high-quality supply of carefully selected frozen sperm from healthy young donors. This allows you to work around your time preferences in finding a suitable egg and sperm donor.

One of the key factors in choosing a donor is a match in the following areas

- ✓ **Phenotypic traits** – we take into account your physical traits in the search for the most suitable donor. These include ethnicity, hair and eye colour, height and overall build. The fact that Europe IVF has one of the largest databases of donors and egg banks in the Czech Republic means that we can satisfy a wide range of phenotypically different patients with either fresh or frozen eggs or embryos.
- ✓ **Blood group and Rh compatibility.**
- ✓ **In the selection process, female and male donors undergo thorough genetic testing to minimise the risk of genetic disorders in your child.**
- ✓ **Biometric artificial intelligence technology will be newly incorporated into the process, offering the most advanced way of matching oocyte or sperm donors to recipients, ensuring the highest possible similarity.**

What to expect

The process in treatment with freshly donated embryos

A cycle with donor embryos is identical to IVF/ICSI treatment with donated eggs, but in this case the sperm is obtained from our cryo storage instead of your partner. One woman donates the eggs, and the other prepares to receive the embryo(s) from these eggs. In order to donate eggs, the donor must undergo ovarian stimulation. We use hormone therapy for the recipient to prepare the endometrium for implantation of the embryo at the right time. We make sure the mucous membrane is ready with an ultrasound.

The egg donor's menstrual cycle is synchronised with that of the recipient, usually with the help of birth control pills.

Sperm from our cryo storage is prepared for fertilisation by our embryologists in a sterile laboratory environment.



1 Consultation with a doctor and selection of a suitable donor

Your doctor will give you all the information you need about the process and go over your preferences and personal requirements regarding the egg and the sperm donor.



2 Synchronisation of donor's and recipient's menstrual cycles

Donor stimulation

The first step is hormonal stimulation of the donor with drugs to ensure the maturation of the optimal number of eggs and their retrieval at the right time.

Stimulation provides a greater number of mature eggs for fertilisation.

During this first phase, the donor's reaction to the stimulation drugs will be carefully monitored by ultrasound to make it as

safe as possible for her and to avoid complications.

Preparation of the recipient

Your doctor will arrange the preparation process with you to synchronise your cycle with that of the donor. Your cycle will be adjusted with hormones in order to prepare your endometrium to receive the embryo at exactly the right time.





3 Egg (oocyte) retrieval and sperm preparation

Eggs are usually retrieved 34–36 hours after the administration of ovulation-inducing injections. The doctor collects the optimal number of mature eggs.

However, not every growing follicle contains an egg. Some may contain mature eggs that cannot be fertilised. The average number of eggs retrieved is between eight and fourteen,

which is considered an optimal egg yield.

Sperm from a suitable donor is selected from our database, reserved in cryo storage and prepared directly for fertilisation.

On the day of egg retrieval, the donor's sperm is prepared in the laboratory for fertilisation.

4 Fertilisation

On the day of egg retrieval, the sperm is processed to select the 'strongest and most active' sperm.

The eggs are most often fertilised by injecting sperm directly into the egg with a thin needle (ICSI). The eggs are checked, their maturity is confirmed and they are prepared for injection (fertilisation). In a gentle laboratory procedure, one sperm is

placed directly into the egg's cytoplasm. The eggs are then placed in an incubator that is set to optimal cultivation conditions. The resulting embryos are checked on the following day(s). Your treatment coordinator will inform you by phone or in writing the day after the retrieval how many eggs have been fertilised, i.e. how many embryos are developing.

5 Embryo development

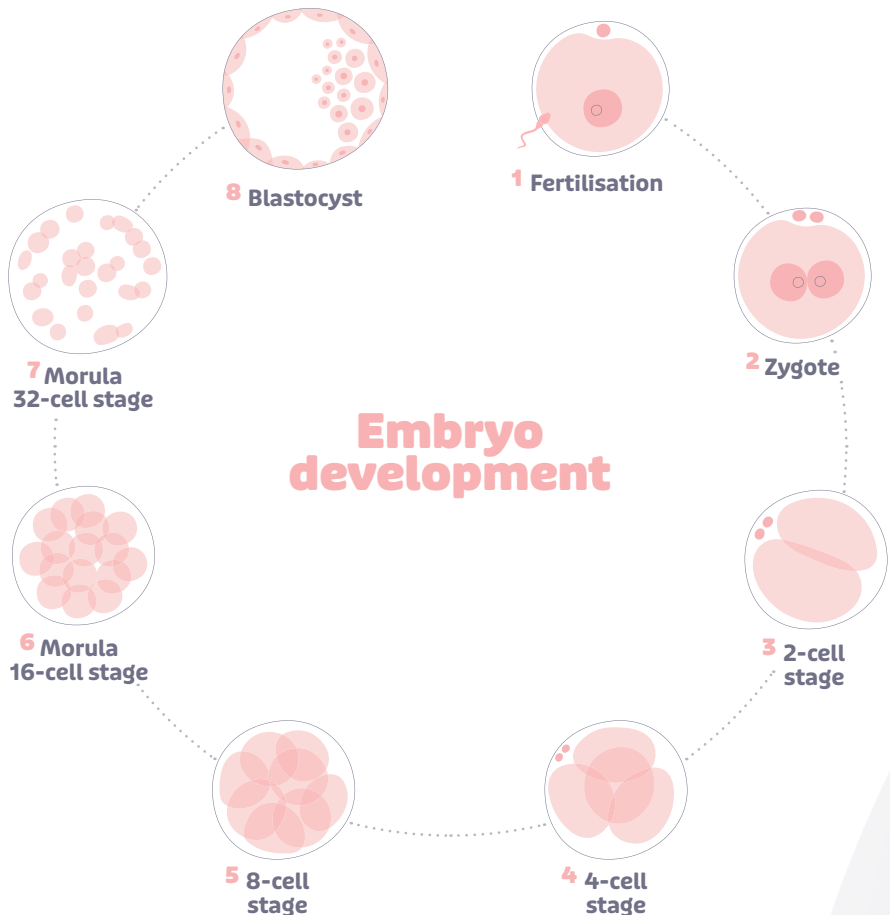
Under laboratory conditions, it usually takes 3-5 days for an embryo to develop from a fertilized egg.

'Embryo cultivation' is the term used for the process following egg retrieval and fertilisation. Your doctor will discuss the length of embryo development and their quality with you.

The embryo transfer is performed on the fifth day of embryo development (blastocyst

stage) due to a higher chance of pregnancy, and sometimes also between the second (2-4 cell stage) and the fourth day (morula stage) of development. Monitoring the development of embryos in the laboratory will help us select the embryo with the best chance of a successful pregnancy.

The resulting embryos are either transferred to the uterus (embryo transfer) or frozen for later transfer (cryopreservation).





6 Embryo transfer

Unless arranged otherwise with the doctor, on the sixth day the patient visits our clinic for an embryo transfer - the introduction of the embryo into the uterus with a thin cannula through the cervix. An embryo transfer is not a complicated procedure and can be performed without anaesthesia. The embryo is placed in a catheter (flexible tube) and transferred into the uterus through the vaginal opening.

In the vast majority of cases, one embryo is transferred to the uterus. If additional quality embryos are available, they can be frozen for later use.

EmbryoGlue

EmbryoGlue is a special transfer medium that can increase the chances of embryo implantation and pregnancy. As the name suggests, this medium works a bit like a tissue glue.

It contains all the nutrients needed for the embryo's development and mimics the

natural environment in a woman's womb, and it also contains a large number of substances that provide optimal conditions for the growing embryo and supply energy for further development and growth.

EmbryoGen/BlastGen

These are special culture media that contain a specific substance, GM-CFS (granulocyte - macrophage colony-stimulating factor/protein). This helps the early embryo to take in nutrients, accelerating its growth and increasing the chance of it reaching the blastocyst stage. It should also protect a healthy embryo from cell stress and apoptosis.

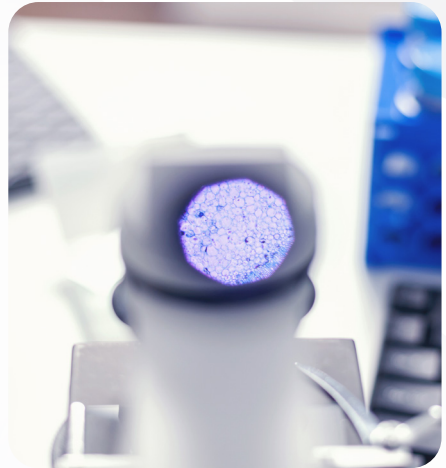
EmbryoGen/BlastGen media are especially helpful for women who suffer from repeated failure of healthy embryo implantation (failed embryo transfers), repeated miscarriages, age factor (40+ years) or idiopathic infertility.

7 Embryo cryopreservation

The freezing of quality embryos is a process we call cryopreservation.

Our clinic uses vitrification, which is a modern method of cryopreservation.

We put the embryo in a protective substance called cryoprotectant. We quickly cool the drop of cryoprotectant with the embryo to the temperature of liquid nitrogen - 196°C, preventing ice crystals from forming in the protective substance and the embryo. We keep the embryo in liquid nitrogen in a sealed case for as long as you wish. Before use, the embryo is quickly warmed to body temperature and the protective material is washed off, and just a few short hours later it is ready for transfer.



Treatment with vitrified donor eggs

The frozen embryos are thawed and then transferred to the uterus at the right stage of the patient's menstrual cycle.

Depending on your hormone levels and menstrual cycle, the embryos will either be transferred at the right time in your natural cycle, or hormonal treatment will be used. The embryo is transferred at the most suitable stage of embryo development.

If your doctor opts for hormonal treatment to increase your chances of pregnancy, you will receive oestrogen treatment for two weeks. After about two weeks of hormone administration, we will perform an ultrasound to make sure your endometrium is thick enough. In the second half of your cycle, progesterone and/or other drugs will be administered to prepare the mucous membrane for implantation. The exact day of the transfer is chosen by the doctor after all the facts are evaluated.

How to survive the two-week wait

After the embryo transfer, it will take about two weeks to get an accurate pregnancy test result. This 'two-week wait' is often a time of great anxiety, worry and frustration for couples trying to conceive.

- ✓ We know it's hard, but try not to obsess over 'pregnancy symptoms' – feeling pregnant doesn't always mean you're pregnant. Some medication may have side effects similar to pregnancy symptoms.
- ✓ Get busy. Plan meaningful or fun distractions.
- ✓ Give yourself just 15 to 30 minutes a day to think about pregnancy, write down your thoughts, search for information on the Internet, or discuss it with your partner or supportive friends/family members, if they support you and share your journey.
- ✓ Avoid pregnancy tests earlier than 14 days after the embryo transfer. The chance of a positive result before your period is late is very small. An hCG shot is administered to help ripen and release the eggs and as a booster, and it could cause a false positive.



Donation legislation

Reproductive cell donation is anonymous on both sides in the Czech Republic. Donors may not receive any remuneration for donated eggs or sperm, only compensation for expenses incurred in connection with the donation.

Donors are selected according to very strict criteria stipulated by the EU Tissue Directive and Czech legislation, which is even stricter in many respects.

In the Czech Republic, reproductive cell donation is permitted and regulated by Act No 422/2008 Coll., as amended. Our

donation programme is fully compliant with this Act and applicable standards.

According to Czech legislation, the woman who gives birth to a child is considered its mother. From a legal perspective, it doesn't matter in maternity whether the child was conceived from the egg of the mother who gave birth or from the egg of a donor. The donor has no legal claim to the child conceived from her egg through IVF/ICSI. This also applies to donated sperm, where the partner/husband of the woman receiving this treatment is considered the father of the child.





What is the success rate of this treatment?

The likelihood of success in each cycle using donated embryos varies greatly and depends on the type of embryos used. Our experience with donated embryos and long-term data collected show a success rate of around 65% per transfer. The success usually depends on the age of the donor and the quality of the eggs and sperm. The success of treatment with donated embryos is largely unrelated to the age of the recipient.

Important information

Don't delay treatment until advanced maternal age.

Successful treatment doesn't just mean a positive pregnancy test, but also a healthy complication-free pregnancy and birth.

Epigenetic effect

Do children conceived from a donated egg have common with the woman who carries and gives birth to them?

Even if you use donor eggs for IVF/ICSI treatment, your baby may have some of your traits. This is because factors such as stress, diet and behaviour can affect how your child's genes are expressed. Your child may have more of you than you think! This can be really reassuring news for those using donor eggs.

It is true that with a donor egg, the baby's genes will come from the donor and they cannot be changed, but how these genes are used (or 'expressed') depends on the person carrying the child. This is called the 'epigenetic effect'.

So even if you use eggs come from a donor, the embryo can still communicate with the mother on a genetic level.

Pregnancy can be an incredible journey, and it is no different for those who conceive a child through egg donation. Even if you use donor eggs or donor embryos, you play a vital role in your baby's development.

It's incredible how strong the physical and emotional bond between a mother and her child can be. This bond is only strengthened during birth, breastfeeding and care, and at every stage of the child's growth until adulthood. More importantly, DNA isn't what makes a family.

We understand that you may have certain worries about egg donation, and we are here to provide the best possible support.

Are you ready to take the first step?

If you are ready, book your first appointment at our clinic.

Our coordinators can offer you in-person, phone or video appointments.

We are available during normal business hours if you request, at a time that suits your preferences.

Book a consultation with one of our leading fertility specialists

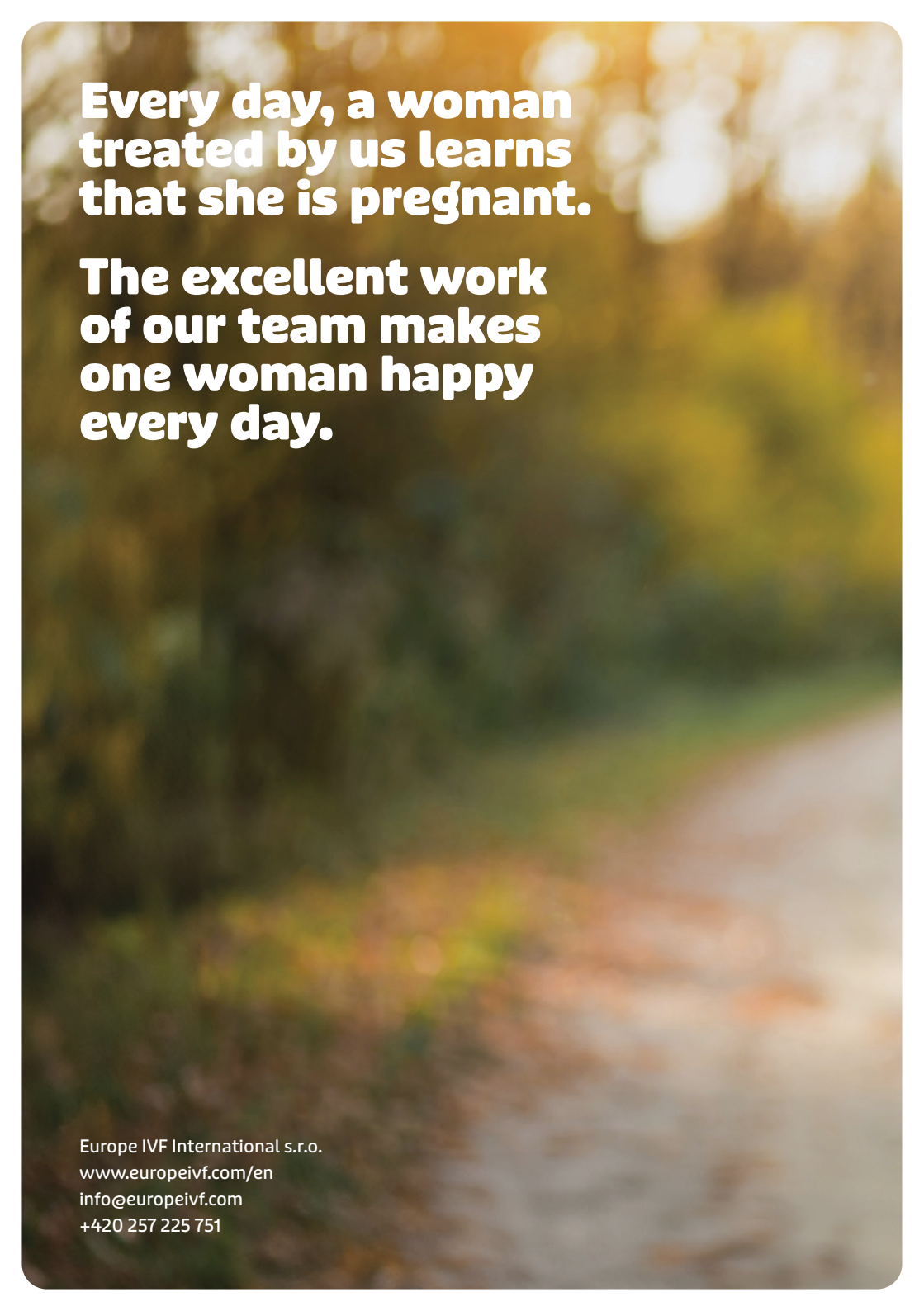


Europe IVF International s.r.o.
www.europeivf.com/en
info@europeivf.com
+420 257 225 751

**If you have any questions,
ask us.**



You dream. We care.



**Every day, a woman
treated by us learns
that she is pregnant.**

**The excellent work
of our team makes
one woman happy
every day.**

Europe IVF International s.r.o.
www.europeivf.com/en
info@europeivf.com
+420 257 225 751