

# FERTILITY Patient guidance

And

11. Egg recipients

## Treatment with egg donation

Both couples and single women may receive unfertilised eggs from another woman.

#### Egg donation can be offered:

- If the woman does not have usable eggs herself
- If there is no reaction to the stimulation of the ovaries despite large doses of follicle-stimulating hormone
- In connection with premature menopause
- If the woman has received repeated IVF/ICSI treatment without there being embryos suitable for transfer to the uterus
- In connection with previous removal of the woman's ovaries
- If stimulation of the ovaries and/or egg retrieval are/is not regarded as medically sound
- If there is a risk of transmitting a hereditary disease
- If the woman has been born without ovaries (Turner syndrome)
- In the event of previous treatment with chemotherapy which is harmful to the ovaries or radiotherapy against the small pelvis

## Anonymous or non-anonymous donor

In accordance with the existing legislation, there is freedom of choice regarding donation type. This means that you must decide which donation type you want before treatment can be commenced. The four types are described below.

#### Anonymous donor

In anonymous donation, the recipient couple will only receive information about a basic profile containing the following details about the donor: skin colour, hair colour, eye colour, height, weight blood type and age.

The anonymity is reciprocal, which means that donor cannot receive information about the recipient couple and any child subsequently born.

#### Non-anonymous donor

#### 1. Donor with extended profile

In donation with extended profile, the donor gives permission for the recipient couple to receive extra information about her in addition to the basic profile, for example, profession, education, hobbies etc. The donor decides what extra information she will provide. The extra information the donor provides may result in any child being able to trace the donor's identity via the Internet etc. However, it is not possible to receive information about the donor's identity at any time. Likewise, a donor can never obtain information about any children born after the mother has been fertilised with the donated eggs.

#### 2. Open donor

In open donation, the donor's identity is not known to the recipient couple at the time of donation, but the donor has agreed with the fertility clinic that information about the donor's identity may be disclosed at a time chosen by the donor. The recipient couple or the child must contact Aleris Fertility to obtain this information.

A widely used type of open donation is donation where it has been agreed that the child, as the only party, can be informed about the donor's identity when the child turns 18.

#### 3. Known donor

In this donation type, the recipient couple know the donor's identity at the time of donation.

## Information about hereditary diseases

Under the Danish Act on Artificial Fertilisation (Lov om kunstig befrugtning), we are obliged to ensure that you are aware of the following:

"When selecting donors, the risk of passing on hereditary diseases, abnormalities, malformations etc. has been limited as much as possible by only using donors who have indicated that they are not aware of any such hereditary risks in their family and who have been interviewed and examined by an experienced healthcare professional to determine this. Despite these special precautions, a hereditary risk cannot be ruled out entirely.

If, against expectation, the child has a health deficiency at birth or in his or her first years of life that you are told may be hereditary, it is therefore important that you report back to the fertility clinic so that a decision can be made as to whether to continue to use the donor in auestion. The same applies if you are informed that the deficiency may concern a communicable disease. Even though the donor has tested negative for communicable diseases such as HIV and hepatitis, the risk is never zero, and you can never check for everything."

## Statutory health requirements for women who wish to donate eggs:

- The woman must be maximum 35 years old
- The woman must be physically and mentally healthy
- The woman must not be the mother, sister or daughter of the man
- There must be no known significant hereditary diseases in the woman's immediate family (parents, siblings and own children). This applies to both physical and mental diseases.
- The woman has been examined to check whether she can infect others with hepatitis B and C, HIV and syphilis.

## Course of your fertility treatment

On the next page you can see the course of an egg donation treatment.

#### Step 1: Preliminary consultation

You will first attend a preliminary consultation, at which we take the time to discuss egg donation and the treatment. An ultrasound scan is done of your uterus, and we discuss your general state of health. On this basis, the doctor prepares a plan for your egg donation treatment.

#### Step 2: Egg donor starts treatment

#### Step 3: The sperm sample – information for the man

When the donor is ready for egg retrieval, we will contact you regarding the scheduling of a date for the egg dona-tion and thus for delivery of the sperm sample. The sperm sample with the accompanying form must be handed in at the fertility clinic at the agreed time. On the form, you must fill in the following information:

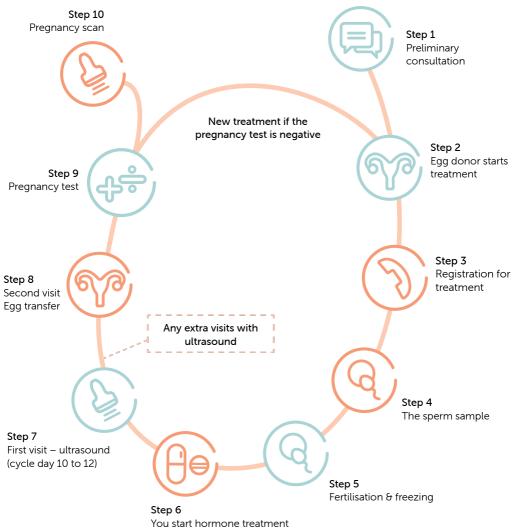
- Name and civil registration (CPR) number of both you and your partner
- Date and time of sperm sample
- Your signature

You should avoid an ejaculation in the last 24 hours before the sample is taken. Prolonged abstinence does not improve the sperm quality.

The sperm sample is provided in the cup handed out to you. It is produced max. one hour before it is to be delivered. If you have a long journey time, you can produce the sperm sample in the fertility clinic.

It is important that the sample does not contain impurities and perfume. The sample must be provided by masturbation. During transport to the fertility clinic, the cup containing the sperm sample should be kept very close to the body, directly on the skin, so that it stays warm.

#### Course of your fertility treatment



(cycle day 2 or 3)

Upon receipt of the sperm sample, we check that the information on the sperm cup matches that on the supplied form.

In the laboratory, the sperm cells are separated from the sperm fluid and purified before being added to the donor eggs. This ensures that the fertilisation is done with the best sperm cells.

Illness with fever may also have a negative impact on the sperm quality. Therefore, you must inform us if you have been ill with high fever > 38 C within the past three months before the treatment.

It sometimes happens that there are problems producing the sperm sample. If you know that this is a problem, talk to us about it beforehand. We can then agree on how to find a solution.

#### Sperm donor

If a sperm donor is to be used in your treatment, we refer to separate patient information on the choice of sperm donor.

## Step 4: Fertilisation and cultivation of the eggs in the laboratory

#### On the egg retrieval day

After the donor has had the eggs retrieved, each egg is placed in a bowl with a cultivation medium. The eggs are then placed in an incubator (heating cabinet), where there is an optimal environment with the right pH value and temperature. The eggs are fertilised with sperm cells a few hours after the egg retrieval.

### There are two methods for fertilising the eggs:

- IVF (In Vitro Fertilisation)
- ICSI (Intracytoplasmic Sperm Injection)

#### **IVF treatment**

In IVF, sperm cells are added to the bowl with eggs. Within the following hours, the egg will be fertilised by a sperm cell. The proportion of eggs fertilised will depend on the quality of the eggs and sperm cells. The egg and sperm cell will take care of the fertilisation themselves in the same way as in a woman's fallopian tube.

As soon as a sperm cell has found its way into the egg, a process occurs in which the 'eggshell' blocks the entry of more sperm cells.

IVF is chosen when the sperm quality is regarded as so good that the natural fertilisation process can take place.

If IVF does not result in egg fertilisation and division, the doctor will recommend the ICSI fertilisation method.

#### **ICSI treatment**

ICSI is also known as 'IVF with microinsemination'. The procedure takes place under microscope and requires special equipment. We examine whether the egg is mature enough for fertilisation before, by means of the ICSI method, we help a single sperm into the mature egg with a thin pipette.

#### EmbryoScope+ and incubator

At Aleris Fertility, we use the new EmbryoScope+ technique for cultivation of fertilised eggs (embryos). EmbryoScope+ provides the most optimal cultivation environment for the fertilised eggs and helps increase the chances of becoming pregnant.

EmbryoScope+ also has a built-in camera, which takes a picture of the fertilised eggs every 10 minutes and makes a time-lapse film of the development, so that we can continuously assess the development and quality of the eggs on a computer without removing them from their safe environment in the heating cabinet (the incubator).

The EmbryoViewer software allows us to select the fertilised eggs that are best suited for transfer and freezing.

#### The day after donor egg retrieval

The first sign of successful fertilisation is two pronuclei, which can normally be seen 18-20 hours after fertilisation by IVF or ICSI. The pronuclei contain the hereditary material from the sperm cell and from the egg. The membrane of the pronuclei is dissolved shortly afterwards, and the hereditary material from the egg and sperm cell merges. The egg now contains a complete set of chromosomes and is ready to continue its development.

If the egg is not fertilised, it will not divide itself and will therefore not be transferred to the uterus.

### Cultivation and freezing of fertilised eggs

If possible, the fertilised eggs will be cultivated to the blastocyst stage (5-6 days) and then frozen. By your signature, you confirm the freezing and we are then allowed to store the fertilised eggs untill the woman turns 46.

In the next month(s), we will make you ready to receive the fertilised eggs. You decide for yourself when this should be.

#### Step 5: Registration for treatment

When you get your menstrual period, please contact us on telephone +45 3817 0740.

Visit www.aleris-fertility.dk for information about telephone hours.

### Please provide us with information about:

- Your name
- Your civil registration (CPR) number
- The date of the first day of your menstrual period

We use the term first cycle day for the day on which your period has really started. You will be given an appointment for commencement of treatment and an ultrasound scan on cycle day 2 or 3.

## Step 6: Hormone treatment with a view to egg transfer

For a thawed, fertilised egg to attach itself to the endometrium, you must be given a specific hormone treatment.

On cycle day 2 or 3, you must therefore start treatment with oestradiol, 1 tablet three times daily. It is important that you discontinue your usual hormone treatment, if any (e.g. Trisequence).

#### Step 7: First visit – ultrasound scan (cycle day 10 to 12)

On cycle day 10 to 12, the doctor will scan you to assess the thickness of the endometrium. An extra scan may be necessary. When the endometrium is regarded as ready, progesterone treatment is commenced. You will continue your oestradiol treatment.

#### Step 8: Egg transfer:

The egg transfer takes place on progesterone day 6.

Before we start the egg transfer to your uterus, you will be identified by both the doctor and the laboratory staff.

An egg transfer to the uterus is normally a pain-free procedure lasting only a few minutes. We usually only transfer one egg. The decision on one or two eggs depends on the quality of the eggs, your age, the number of previous attempts and the cause of your childlessness.

This is done in the same way as a ordinary gynaecological examination, in which the doctor inserts a thin catheter through the cervical canal and attaches/places the egg surrounded by a bit of fluid in the uterus.

Before you leave the fertility clinic, you will be given an appointment for a pregnancy blood test. In addition, the further course of action will be planned in case you do not get pregnant.

#### After the egg transfer

You can leave the fertility clinic immediately after the egg transfer.

#### Hormone treatment:

You will continue with the oestradiol and progesterone treatment until we know whether you are pregnant.

If you are pregnant, you will continue with the treatment up to and including pregnancy week 10.

#### Precautions after egg transfer

We know that an inappropriate lifstyle reduces your chances of getting pregnant. We recommend that you live as healthily as possible after the egg transfer and that you avoid hard physical training and hard work. You can have sexual intercourse and engage in light exercise.

#### Step 9: Pregnancy test

Approximately 11 days after the egg transfer, you must take a pregnancy test in the form of a blood test showing whether you have the pregnancy hormone hCG in your blood – that is whether you are pregnant. This type of test is more accurate than a urine sample.

It is important that the pregnancy test is done also even if you have begun bleeding.

You can choose to have the blood test done with us or with your own doctor. If your own doctor does the blood test, please inform us of the result. In a few women, it may be necessary to repeat the blood test so that we can follow the development of the pregnancy. Too low increases may indicate an incipient abortion or give rise to suspicion of a pregnancy outside the uterus.

#### Positive pregnancy test

If the test is positive, you will be given an appointment for a pregnancy scan.

#### Step 10: Pregnancy scan:

We perform a vaginal ultrasound scan approximately three weeks after a positive pregnancy test. You will then be seven or eight weeks pregnant.

The doctor checks for heart flashes and number of foetuses. By measuring the foetus from head to tail, the age of the foetus can be calculated and a future due date for the expected birth can thus be set.

You may choose to have a pregnancy scan done near your home if this is easiest for you.

If everything appears to be in order, you will receive information about the further course.

The fertility clinic collects information about the individual courses of pregnancy and childbirth to get an overview of the fertility clinic's results, which must be reported to the Danish Health Data Authority. After you have completed your pregnancy, please fill in a form about the course of your pregnancy and childbirth. You will be given the form in connection with the pregnancy scan. Please fill it in and send it to us after you have given birth.

#### Negative pregnancy test

If the pregnancy test is negative and you are receiving hormone treatment, you will cease taking both oestradiol tablets and progesterone supplement. You will get a bleeding after some days. You can then agree with us whether you want to start a new egg donation treatment.

## Possible side effects and complications

## Pregnancy toxaemia and elevated blood pressure

All research indicates that pregnancies with donor eggs have 2-3 times higher risk of pregnancy toxaemia (prenatal poisoning) and elevated blood pressure during the pregnancy compared to pregnancies with own eggs. This may mean that you will need blood pressure lowering medicine during your pregnancy and that the birth is induced before the scheduled due date. This risk increases if you are pregnant with twins. We recommend that you commence preventive treatment with acetylsalicylic acid daily from pregnancy week 12 and up to and including pregnancy week 37.

#### Cancellation of egg transfer

In some cases, there is unfortunately no fertilisation or division of the eggs. In other cases, the eggs have divided themselves, but their quality cannot result in pregnancy. The reason for the lack of fertilisation/division may, for example, be the quality of the sperm and/or the egg.

#### Pregnancy outside the uterus

The fertilised egg is transferred to the uterine cavity, but it may occur that the egg nevertheless moves out into the fallopian tube. If a pregnancy outside the uterus is suspected, and you experience pain and/or bleeding, you must contact the fertility clinic, your own doctor or the medical emergency service.

#### **Twin pregnancies**

There is an increased incidence of twin pregnancies in connection with assisted reproduction. Twin births often occur prematurely and are generally associated with more complications and risks. The recommendation is therefore that only one fertilised egg is transferred to the uterus unless there is a medical reason for transferring two fertilised eggs.

## Medicine: Effect and possible side effects

#### Oestradiol

Oestradiol builds up and matures the endometrium in your uterus. It may cause side effects in the form of accumulation of fluid in your body, bloating and breast tension.

#### Progesterone

Progesterone maintains the endometrium and optimises the conditions for the fertilised egg to attach itself. It may cause fatigue, and you may feel breast tension, nausea and headache.

#### General side effects of medicine

All medicine may cause allergic reactions. However, this is extremely rare for the preparations used. Other symptoms may include redness, swelling, itching, fever and, in extremely rare cases, respiratory difficulties.

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**Telephone hours** Visit www.aleris-fertility.dk

**Opening hours** Visit www.aleris-fertility.dk

#### Aleris Hospitaler ©

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