

Lilla boken B

A booklet on childlessness – causes and treatment

1. What does infertility actually mean?

Infertility is defined as an inability to conceive a child after twelve months of regular unprotected intercourse. Infertility affects between every seventh and tenth couple, which means that, in Sweden, about 250,000 couples of fertile age are involuntarily childless. Most of these couples have children sooner or later, either spontaneously or with assisted fertility methods.

An evaluation of infertility follows a certain pattern and the first step is an examination of both the partners together to find the underlying causes. A basic investigation is usually completed within about six months. Some tests need to be carried out at different times during the menstrual cycle and this can affect the length of time of the investigation.

A fertility investigation can be stressful in many different ways. The time that it requires is often a source of irritation and it can feel extremely difficult to have to talk to someone about such private matters. What's more, the various procedures of the investigation can sometimes involve some discomfort. Yet at the same time, most couples feel a sense of relief that they have at last made the decision to contact a doctor for help.

2. How do we normally react when we realise that we are having problems conceiving?

Most of us react intensely when our dream of having a child is thwarted. But obviously, we all react differently, depending on whom we are. Our reactions, experiences, values and our social relationships are affected by our personality and the importance of a child in the image we have created of ourselves. In this and in other difficult situations, it is vital to have people around who can offer support and understanding.

Research conducted in various parts of the world shows that infertility is a source of anxiety, depression and stress. Infertility also puts a strain on the couple's emotional and sexual relationship.

When our reproduction is threatened, it affects key aspects of our sexuality. Many of the reactions experienced by women and men are similar – longing, disappointment and sorrow. Yet we all express these feelings in different ways. And this can lead to misunderstanding and may even put additional strain on the relationship. At this point, couples may need help to realise that their present situation is special and urgent. It is vital to seek professional help – not only when it feels like the world has come crashing down, but to prevent that from happening. All IVF clinics are able to recommend professional counsellors who have the specialist knowledge and the time to discuss these difficult issues. Counselling offers couples the opportunity to put their emotions, thoughts and many questions into words.

At this stage, with all the investigations and treatment for infertility, many feel that every moment or much of their life is taken up with this ordeal. But this phase does not last forever. For many couples, it ends in pregnancy and a child. But even for those who are not fortunate, it brings closure to the problem of childlessness. The treatments cannot continue for ever.

3. The most common causes of involuntary childlessness

Female causes

- ✓ Partially or totally blocked Fallopian tubes
- ✓ Endometriosis
- ✓ Hormonal disorders
- ✓ Recurrent miscarriages
- ✓ Previous treatment for cancer
- ✓ Uterine fibroids (myomas) and other changes in the uterus

Male causes

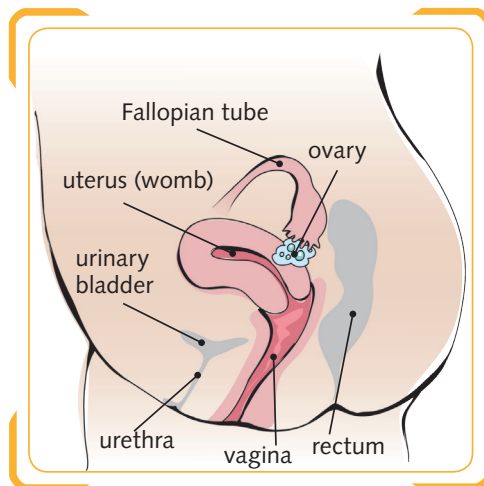
- ✓ Reduced sperm quality/absence of sperm
- ✓ Blocked spermatic ducts
- ✓ Hormonal disorders
- ✓ Erectile dysfunctions
- ✓ Previous treatment for cancer
- ✓ Use or abuse of anabolic steroids

In some cases, infertility may be due to a combination of female and male factors and sometimes it is not possible to determine the cause (known as “unexplained infertility”).

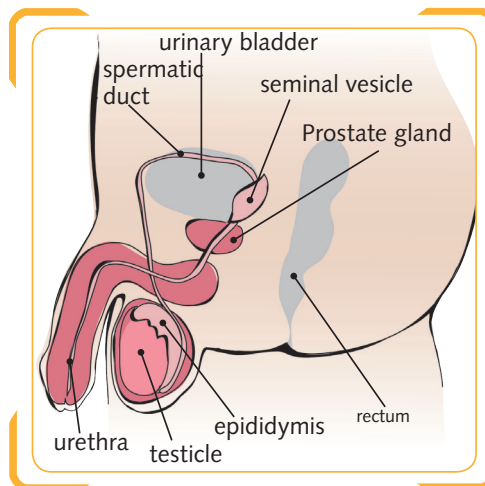
People who are overweight or underweight can have problems conceiving. This might be because women ovulate less frequently or not at all if they are overweight or underweight. There is documented evidence to show that the problem of childlessness often resolves itself when a person corrects their weight problem and seeks help and counselling. Smoking and alcohol can also have an adverse affect on fertility for men and women.

Anatomy and physiology

Female anatomy

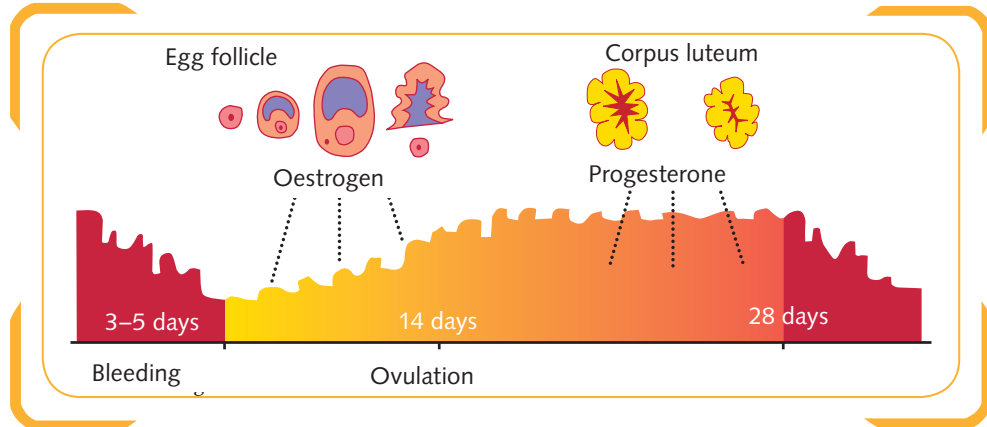


Male anatomy



4. The menstrual cycle

- Basically, the female menstrual cycle is controlled by an interaction of the hypophyseal hormones (FSH and LH) and the ovarian hormones (oestrogen and progesterone).
- At the start of the menstrual cycle, FSH and LH stimulate the development of a number of egg follicles, of which only one attains full maturity. These follicles produce oestrogen, which causes the lining of the uterus to thicken in preparation for reception of a fertilised egg.



- High levels of LH start the process of ovulation, when the follicle ruptures and the egg cell is released into the Fallopian tube. The follicle is transformed into a progesterone-secreting corpus luteum, whose main function is to aid the implantation process.

The egg is capable of being fertilised for 12 to 24 hours after it has been released, while sperm survive for several days.

5. Treatment of involuntary childlessness

Hormone stimulation

When hormone stimulation is used, it can be important to inhibit/control the woman's own ovulation hormone. Many hormonal treatments therefore begin by reducing the natural production of LH. This can be accomplished in a number of different ways, e.g. by the administration of a drug in the form of a nasal spray, injections or tablets.

Stimulation of ovulation

This method can be used when the woman has ovulation problems, which can result in infrequent or absent menstrual periods. This treatment is administered in the form of tablets or injections with the purpose of inducing egg maturity and bringing about ovulation.

Insemination

For this method, the sperm must be able to reach the egg and fertilise it on their own. This method is an option when no apparent reason can be found for the couple's childlessness, and in the case of a certain type of male infertility. Insemination involves passing a thin, plastic catheter through the cervix and injecting the sperm into the uterus. This method helps the sperm to reach the egg.

IVF (In vitro-fertilisation/test-tube conception)

This method can be used in most cases of involuntary childlessness. IVF treatment involves stimulating the ovaries to produce more eggs (follicles) than usual. This is done by injecting a follicle-stimulating hormone every day over a period of 10 to 14 days.

The stimulation is observed and monitored by taking blood samples and by ultrasound. In the evening, two days before the eggs are retrieved, an hCG hormone injection is given to stimulate full maturity in the follicles. The eggs are collected/aspirated 34 to 39 hours after this injection.

Egg retrieval/follicle aspiration

It is only natural to feel rather tense before this procedure, especially if it is the first time, so before the eggs are retrieved, the woman may be offered painkillers or a sedative. Some clinics offer acupuncture as an alternative method of pain relief.

Using vaginal ultrasound to guide the way, each follicle is punctured and the contents are extracted and examined under a microscope. The egg cells are placed on a dish which is put into an incubator. On the same day, the man provides a sperm sample. The sperm are washed and prepared for the fertilisation of the eggs.

Microinjection (ICSI)

ICSI is an abbreviation of Intra Cytoplasmic Sperm Injection. This method is used when sperm mobility is poor and the sperm are incapable of fertilising the egg. Under a microscope, a single sperm is sucked into a very fine glass pipette and is inserted directly into the egg cell. The treatment of the couple does not differ from normal IVF treatment. The eggs are retrieved in the same way and the microinjection is carried out in the laboratory on the same day.

Embryo transfer (ET)/transfer of fertilised egg

The day after the eggs have been collected, they are checked to see if they have been fertilised. The fertilised eggs are allowed to develop another two to five days. One embryo (two embryos in special cases) is selected for transfer to the womb. If a surplus of healthy and viable embryos is produced, they can be frozen and stored for use in a future treatment. Legislation allows embryos to be frozen for up to five years.

Embryo transfer requires no preparation. However, the patient is usually requested to have a full bladder which can facilitate the procedure. A thin catheter is passed in through the cervix and the embryo is placed in the uterus. The procedure takes just a couple of minutes and causes little or no discomfort.

During the period following the transfer, the ruptured follicles develop into corpora lutea which produce the hormone progesterone. The woman will be given injections or vaginal suppositories of progesterone to help support the early development stage until it is time for the pregnancy test. Progesterone helps the lining of the uterus to become more receptive to the fertilised egg.

Frozen and thawed embryos are transferred either in a natural menstrual cycle or when the woman is undergoing hormone treatment.

Side effects of the treatment

The doses of hormones may cause overstimulation, i.e. too many follicles develop.

The symptoms of overstimulation are pronounced abdominal swelling and/or pain. Some women may experience shortness of breath. If you develop any of these symptoms, contact your IVF clinic or nearest women's health clinic immediately. Hospital care may sometimes be necessary, but usually a few days of rest and treatment at home are quite sufficient.

6. Step by step guide to IVF treatment

1.

- a) Hormone stimulation. Before hormone stimulation, the woman's own production of hormones (FSH, LH) and ovarian function are suppressed or regulated using nasal spray, injections or contraceptive pills.
- b) Wait for natural menstruation.

2. Stimulation

The growth and development of the follicles is stimulated using hormone injections. Blood samples are taken to determine the effect.

3. Examination

A vaginal ultrasound examination is conducted to count the number of follicles, check their growth and check the lining of the uterus.

4. Follicle puncture

The mature follicles are punctured using a needle attached to a vaginal ultrasound and the eggs are collected.

5. Inspection and culture

The eggs are inspected and assessed under a microscope.

6. Preparation

The sperm are prepared to make them capable of fertilising the eggs.

7. Fertilisation

The sperm are placed with the eggs.

8. Division

Two days after fertilisation, the eggs have begun to divide and the quality is assessed before transfer.

9. Embryo transfer

After 2 to 5 days' cultivation, the divided embryo is transferred to the uterus by means of a thin catheter.

10. Hormonal support

Hormones are often given during the period straight after the transfer to increase the possibility of pregnancy.

11. Pregnancy

If the pregnancy test is positive about 18 days after the transfer, the pregnancy should be confirmed by an ultrasound examination after about 3 to 5 weeks.

7. Treatment of male infertility

The causes of male infertility vary. For instance, the man may be producing sperm quite normally, but an obstruction of the connection between the epididymides and the seminal vesicles may prevent the sperm from getting any further. Other causes may include nerve damage, brain or spinal injury or previous infection.

Today, there are several methods of treatment that make it possible to treat many more infertile men than previously. If there are no sperm at all in the ejaculate, a fine needle can be inserted into the testicle (TESA/TESE) or the epididymis (PESA) to draw out sperm. This is performed under local anaesthetic.

8. Sperm donation

If the man is unable to produce sperm of his own, the couple may consider artificial insemination of the woman using donated sperm (AID). This method of treatment can also include fertilisation outside the body using donated sperm (IVF treatment). If the woman is unable to produce eggs of her own, the couple may consider egg donation treatment.

At present, Swedish legislation does not allow couples to be treated with both donated sperm and eggs.

As of 2005, lesbian couples have the right to fertility treatment in the form of assisted insemination at Swedish state hospitals. Assisted fertilisation can be performed by means of insemination or in vitro fertilisation (IVF).

9. What is the chance of success?

Many couples find the period from treatment to pregnancy testing the most trying and stressful stage of the process. Many describe it as a vacuum, with emotions ranging from optimism to pessimism in anticipation of the results.

The chances of succeeding with the treatment depend on the cause of the infertility, the age of the woman and the number of attempts made. When frozen and thawed embryos are transferred, the chance of pregnancy is somewhat lower. The risk of miscarriage after assisted fertilisation is no greater than with normal conception. Extrauterine pregnancies occur on very rare occasions. If the woman becomes pregnant, an ultrasound examination is carried out approximately four weeks after the treatment. If everything appears normal, no special action is required and the pregnancy is monitored at the antenatal clinic.

Several years ago, Sweden launched a policy of transferring only one embryo in order to limit the number of twin pregnancies and reduce the health complications associated with them. This has resulted in a decrease in the risks of premature birth and other complications during pregnancy.

10. What lengths should couples go to have a baby?

One way of looking at this question is to analyse and determine what is reasonable and what is unreasonable. On the one hand, couples have to cope with all the stress and strain that the process involves, the emotional burden, time-consuming treatment, manipulation of the woman's body and (if receiving treatment at a private clinic) the financial strain too. On the other hand, there is the chance that the couple might get their much-longed-for baby and a sense that they are doing everything they can about their childless state.

Naturally, this is first and foremost a decision that couples have to make themselves if possible. Some couples may find it difficult to gain the support of those close to them. Some couples choose not to tell anyone. Other couples do tell, but feel how hard it is to get any real understanding from people who have not gone through the same experience.

This is when professional help is required in order to ventilate and work through these feelings. There are midwives, doctors and usually also social workers or psychologists who are trained to help couples at the clinics. Before or during the treatment, it may be appropriate to think about and discuss together the fact that the treatment might not be successful.

Other options can then be considered, such as adoption or accepting a life without children. If a couple gives this some time and thought beforehand, it might perhaps be easier for them to cope with a possible failure. According to the Swedish Academy, the word "adopt" means "to accept as one's own child; to take a child to be one's own". Adoption is not a solution to infertility. However, it is a solution to the problem of not being able to be a parent. If you are considering adoption, you can contact any one of the authorised adoption organisations in Sweden.