



# JOURNEY TO PARENTHOOD

Your Simple Guide to Fertility



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Due to the specificity of medical procedures and the healthcare frameworks in each country, there are minor differences in the text of the book across different language versions. These differences do not affect the meaning of the messages conveyed by the book.

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# Introduction

Welcome to this special book - a friendly guide that speaks about a topic that touches many lives: infertility. We understand that talking about these things can sometimes feel overwhelming, but you're not alone. This book is here for you, offering understanding and information in simple words that everyone can connect with.

Before we dive in, we want you to know something important: You're free to explore this book in your own way. Maybe today, you're curious about one topic, and tomorrow, it might be something else. That's perfectly fine!

This book is your companion, and you get to choose the path. You might find comfort in certain chapters, and others might become your go-to resource when you need a little extra support. So, feel free to explore the chapters, and make this book your own.

Infertility can be a challenging journey, and we want you to have the tools to navigate it with a little more ease. Sometimes, you may want to read a chapter more than once, and that's perfectly fine too. This book is here to be a comforting friend, offering insights, and advice that you can come back to whenever you need.

Remember, it is perfectly natural not to have all the answers, and seeking guidance is absolutely fine. This book is designed to be a helping hand when you're facing difficult moments. So, take your time, be kind to yourself, and know that as you read these pages, you're not alone on this journey.

Let's embark on this journey together, one chapter at a time.

## **A note about the language used in the book**

We've made a genuine effort to use inclusive language in this book - recognising that families come in different shapes and sizes and that not all people identify with a certain gender. At the same time, we find it important to use the words woman and man, but also partner. We have done our best to vary our language to include all families.

# **Journey to parenthood**

**YOUR SIMPLE GUIDE TO  
FERTILITY**





CHAPTER 1

# **What is infertility?**

The word **infertility** sounds scary.

For many people, infertility is something distant and unknown, something that happens “to other people, not to us”. In fact, around 25 million people in the European Union alone are facing infertility. This means that every sixth couple has trouble conceiving a child.

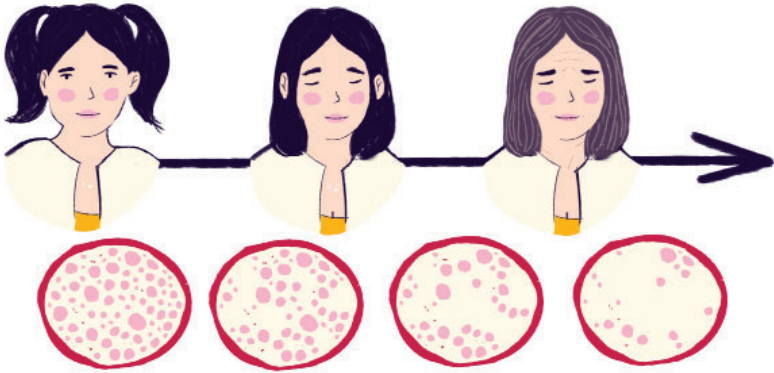
### **What exactly is infertility?**

Usually, when a couple has regular and unprotected sexual intercourse, the chances of conception are about 20-25% each month. We talk about infertility when the couple is trying for a baby for 12 months with no success. When the female partner is over 35 years of age, this period is even shorter - only 6 months.

There are two types of infertility. When the female partner has never achieved pregnancy despite trying, this is called primary infertility. The inability to carry a pregnancy to term is also considered infertility. In this case, we are talking about secondary infertility, which is when a pregnancy has been achieved at least once, even if the outcome was negative. This distinction is important because of the different treatment approaches.

Infertility can be caused by several reasons and very often there is more than one reason why pregnancy is not happening. Common reasons for men and women can be classified as medical or lifestyle factors such as stress, smoking, alcohol abuse and unhealthy diet. We will come back to them in detail later.

The age factor is very important, especially when it comes to female infertility. It can be a big hurdle to overcome. A woman's ability to conceive gradually decreases with age and drops sharply after 35. By the age of 45 years, it is practically impossible to conceive with own eggs.



## **Infertility is not only a woman's problem**

Infertility, apart from being a health problem, is also an emotional challenge. Dealing with the psychological effects is of great importance. Unfortunately, infertility is still often perceived as a solely female issue. Accepting that infertility concerns both partners, helps a couple to deal with the emotional trauma. Acting as a team during all stages of fertility treatment makes the task much easier - not only for the couple but also for the doctors.

It has been proven that the causes of infertility are equally distributed between men and women. There is also a percentage of couples in which it is impossible to determine the cause of infertility - this is called **unexplained infertility**.

Placing the stigma of infertility solely on the woman leads to one of the biggest obstacles in overcoming infertility. Sometimes men refuse to accept that their condition may be a contributing factor to infertility and are unwilling to begin diagnosis and treatment. This results in a loss of valuable time for the couple and often subjects the female partner to unnecessary, expensive and painful medical procedures. Diagnosis of male infertility is quick, easy and painless. Therefore, it is always recommended to start by diagnosing the male partner.



The path to the dreamed-for baby is not easy and needs trust and mutual support. Active participation in the treatment of infertility of both partners and trust in their doctors at the same time may help them go through the difficult process. The better the team of patients and doctors works together, the closer is the dream to reality.

### **What can we do? Let's not waste time!**

Time is very important in overcoming infertility. The quicker the problem is diagnosed, the better the chances to solve it. When you suspect that there is an issue with conceiving, it is best to consult the right doctors.

Be critical. The amount of information on the Internet is overwhelming. Social networks “helpfully” provide us with countless articles, containing false information or commercials. It is often suggested that a universal remedy exists for all cases of infertility, but this is very far from the truth.

Often people affected by infertility share more with others who have experienced the condition rather than with relatives, whose reactions might be far from ideal. They might not offer enough support or may put pressure on the couple to conceive. Shame is still a barrier for many people to speak up about their fertility issues resulting in hiding the problem, not seeking specialist advice and running out of valuable time.

This need for secrecy sometimes can push you to resort to folk remedies. Such methods are ineffective, they waste invaluable time and can also cause serious health problems.

Infertility is a complex issue. Any attempts for self-medication and self-treatment may be harmful and can pose risk to your health. These attempts could cause emotional stress because they do not produce positive results. Moreover, delaying professional help consumes valuable time and decreases chances for the desired outcome. For successful treatment of infertility, you - like everyone else in your situation - need professional medical help. We call these medical professionals reproductive health specialists.

To deal with infertility, you need a specialist who will guide you through this difficult path. This specialist is not just any gynaecologist or general practitioner. Very often, an awful lot of valuable time can be wasted because those who need medical assistance are not referred to a suitable specialist. A gynaecologist or general practitioner can provide guidance and perform initial diagnostics and examinations. However, when it is established that there is a fertility problem, you should be referred to a reproductive medicine specialist.



In specialized reproductive health clinics, doctors have the necessary knowledge and experience to guide you to the shortest possible and most successful path to a baby. The reproductive medicine doctor will first determine the cause of infertility and will prepare an individual treatment plan based on the medical condition of the partners. Sometimes this plan may start with a simple transition to a healthier lifestyle which could be enough. Hormonal problems or infections may need to be treated, and in some more complex cases, medically assisted reproduction procedures may be necessary.

Entrusting your innermost dream to a doctor or a team of specialists is not easy, but this is the only way to get adequate care and a solution to the problem of infertility.

***The most important message is that infertility is not a verdict, it is not shameful and you can overcome it. You are not alone!***



***Things to remember:***

- » Seek medical help if pregnancy doesn't happen after 12 months of trying
- » Seek medical help earlier if the woman is over 35 or if there is a known health problem
- » Infertility is not only a woman's problem
- » Find the right doctor
- » Don't delay seeking specialist help as time is at stake



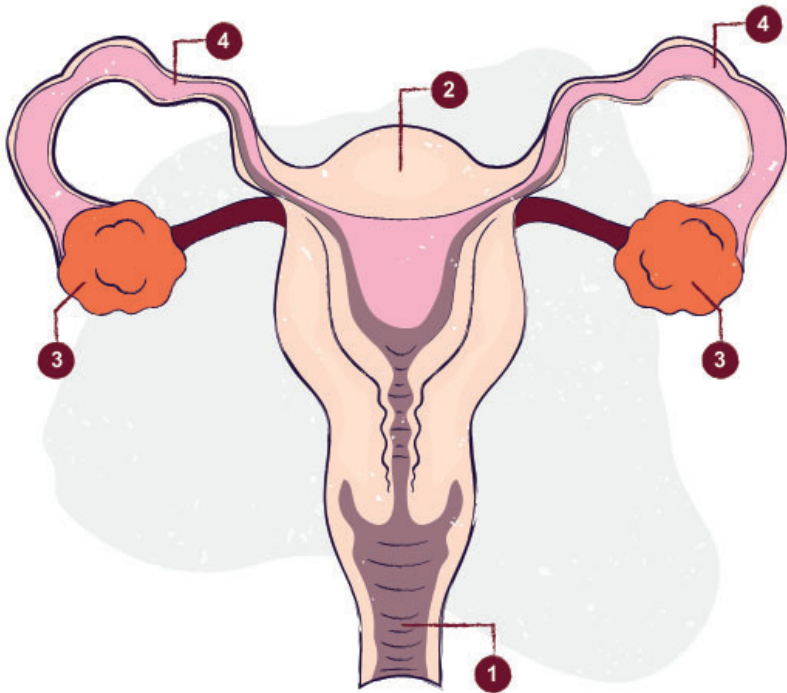




CHAPTER 2

# **Female reproductive system**

This system consists of the organs of the human body that produce the female reproductive cells responsible for fertilisation and that take care of the future baby. These organs are located in the lower abdominal area. Female genitals consist of external parts (the outer and inner folds of the vulva and the clitoris) and internal parts (vagina, cervix, uterus, ovaries and fallopian tubes).



## **The female reproductive system at a glimpse**

### **Vagina (1)**

It connects the uterus with the external genitalia. It is a path to and from the uterus for instance for menstrual bleeding and seminal fluid. It is also a part of the birth canal.

### **Uterus (2)**

The uterus (also called a womb) is where a future baby grows during pregnancy. It can expand significantly. Muscles in the uterus push the baby out during childbirth.

### **Ovaries (3)**

Ovaries are two almond-shaped organs, one on each side of the uterus. They produce hormones, and develop and release eggs (it is called ovulation).

### **Fallopian Tubes (4)**

Fallopian tubes connect the ovaries to the uterus, one on each side. They carry an egg released during ovulation from the ovaries to the uterus. Fertilisation also takes place in the fallopian tubes and when it happens a fertilised egg continues travelling to the uterus through the fallopian tubes.

### **Female Sex Hormones**

Hormones are substances produced and released by body organs that initiate and control various functions of the human body. Sex hormones take a vital role in human reproduction.

### **The menstrual cycle**

This is a recurring process that takes place in the woman's body. It starts on day 1 with menstruation and continues with changes in the uterus lining in preparation for a possible pregnancy. If pregnancy doesn't occur, menstrual bleeding takes place, starting a new cycle.

## The female reproductive system in details

### Vagina

The vagina connects the uterus to the external genitalia and is about 7.5-10 cm long. It carries the menstrual flow out of the body during the menstrual cycle. During sexual intercourse, the seminal fluid enters the vagina near the cervix. The vagina is also part of the birth canal when the baby is born. The vaginal walls are quite elastic and stretchable.

### Uterus

The uterus has the important task to provide a safe nest for the fetus during its 9 months of intrauterine development. It's shaped like an inverted pear and is about the size of a fist. The uterus is in the abdominal cavity and consists of two parts - the larger is called the body and the smaller is the cervix. The cervix opens in the vagina and has a mucus

plug. Through this plug, the menstrual bleeding exits the uterus and the man's sperm enters the uterus.

During puberty, the inner lining of the uterus begins to prepare each month to receive a fertilised egg. It becomes looser and thicker, creating favourable conditions for the embryo about 6 days after fertilisation of the egg. If fertilisation doesn't happen or if a fertilised egg doesn't implant in the uterus, at the end of the cycle the part of the thick lining is shed with menstrual bleeding. The walls of the uterus are very elastic. If pregnancy occurs, the uterus expands gradually as the fetus grows. The muscles of the uterus have a very important task, to push the fetus towards the vagina during childbirth, which is where the baby comes out.

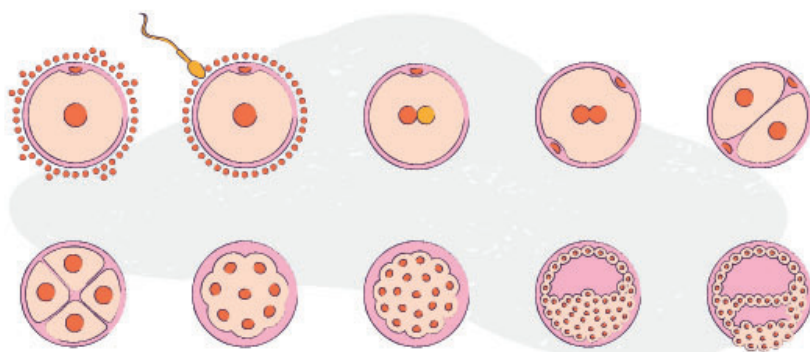
### Ovaries

The ovaries are located on both sides of the uterus and

are about the size of an almond. Did you know that women are born with all their eggs? There are about 400,000 follicles with eggs at birth. As women age, this reserve gradually decrease. Only a small part of these eggs can develop fully for fertilisation. The fertile period in a woman's life begins at puberty and lasts about 30 years. During that time, an average of 13 follicles with eggs mature each year. This happens at average intervals of 28 days, so for the entire life of the woman, only about 400 eggs mature.

Each mature follicle ruptures and releases one egg – this is called ovulation. The egg begins its journey to the fallopian tube, where it can eventually meet the sperm.

The human egg is about the size of the tip of a pin and it is the largest cell in the human body. It has a round or oval shape and several protective sheaths, surrounded on the outside like a crown.



## **Fallopian tubes**

These tubes are located in the upper part of the pelvis and have a length of about 10-12 cm. Their openings loosely cover the ovaries. At the other end, the tubes are connected to the uterus. They play an important role in the movement of the mature egg. This is where the fertilisation of the mature egg takes place within 24 hours of ovulation if there are any spermatozoa present. The surface of the tubes is covered with cilia that move towards the uterus. This movement helps the egg travel to the uterus. The fertilised egg reaches the uterus in about 3 days and is ready to get implanted in the wall of the uterus.

During its journey through a fallopian tube, the fertilised egg divides itself many times into more and more cells that form an outer and an inner layer. The outer layer will develop the placenta, which will take care of the fetus nutrition for the next 9 months and supply it with vital substances from the mother's body. The inner layer will form the embryo, which in the coming months will spend its time in a warm and safe place - located in the uterus amniotic sac, full of liquid. The embryo will feed through an umbilical cord connected via the placenta to his mother and will receive everything necessary for its development. It will grow in size and form, and will fully develop its organs and systems until it becomes a viable baby. Then, at the command of the female sex hormones, it will leave the uterus and will begin its journey into the world.



## **Female sex hormones**

The female sex hormones are the directors that initiate and manage all processes in the female reproductive system. They are produced by different organs and released directly into the bloodstream in different amounts depending on the age, the phase of the menstrual cycle, or the stage of pregnancy. The hormonal tests give your doctor important information about the state of the reproductive system. Here are the most important female hormones:

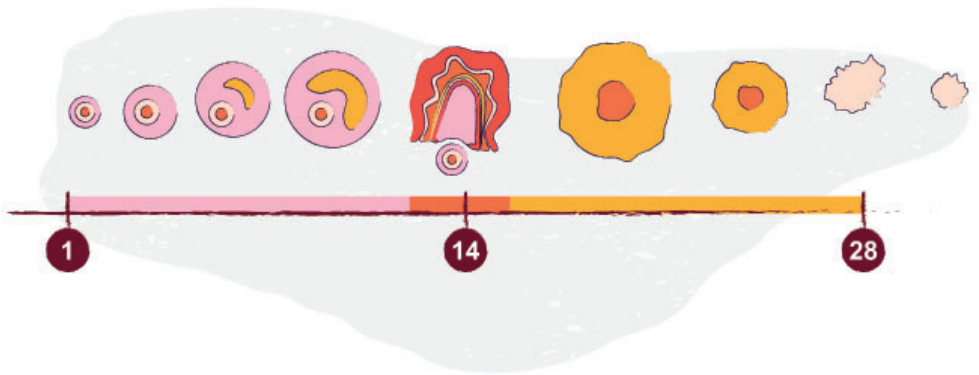
- **FSH** (follicle-stimulating hormone) – released by the pituitary gland located in the brain. It stimulates the ovaries to develop an egg. It is tested during the initial phase of the menstrual cycle. Its values indicate the ovarian reserve.
- **LH** (luteinizing hormone) – has a role in triggering ovulation. The highest levels of LH are observed before ovulation.
- **Estradiol** – the main estrogen hormone in the female body and has various functions. It plays an important role in the process of maturing the eggs and in thickening the lining of the uterus.
- **Progesterone** – responsible for the preparation of the uterus for implantation of the fertilised egg.
- **Prolactin** - is released from the pituitary gland located in the brain. Its main function is to stimulate the production of breast milk in women.

## The menstrual cycle

This is a physiological process of cyclical changes in the uterine lining of a woman and is regulated by female sex hormones. It has an average duration of about 28 days (could be shorter or longer) and covers the time between two menstrual periods. The beginning of the menstrual bleeding is counted as Day 1 of the menstrual cycle. Each menstrual cycle consists of 3 phases.

- **The first phase** lasts from day 1 until ovulation - on average 10-14 days. The hormones LH and FSH are released, increasing the production of estrogen in the ovaries.
- **The ovulation** - during this phase, the estrogen stimulates the maturation of a follicle in the ovaries. When the follicle matures, it bursts and releases the egg. Ovulation occurs about 14 days before the end of the cycle and lasts a short time - only 1-2 days.
- **The last phase** lasts from the end of ovulation until the end of the cycle. After the egg is released, the follicle becomes the so-called "corpus luteum" that produces progesterone, preparing the uterus to receive the fertilised egg.

It is important to know that ovulation does not occur in every cycle. It is perfectly normal to have occasionally a cycle during which there is no ovulation.



### *Things to remember*

- » The uterus accommodates the fetus
- » The ovary releases one mature egg during ovulation
- » The sperm meets the egg in the fallopian tubes
- » The menstrual cycle is controlled by female sex hormones
- » The woman's ability to become pregnant starts with puberty and usually lasts for about 30 years

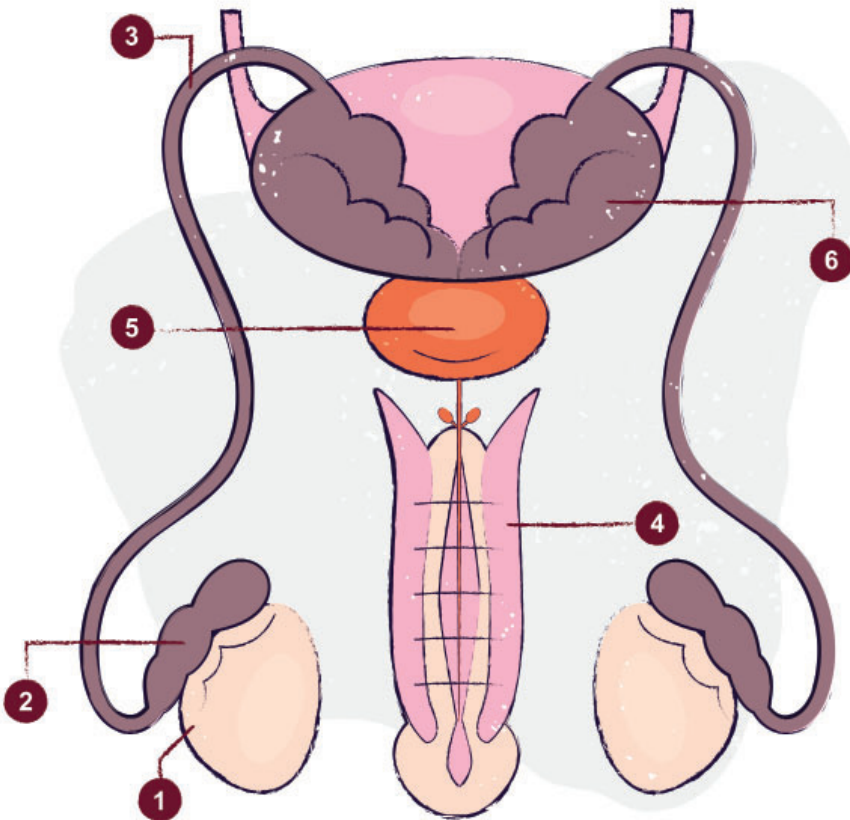


CHAPTER 3

# **Male reproductive system**

This system consists of the organs of the human body that produce the male reproductive cells which are responsible for fertilisation:

- testicles
- epididymis and vas deferens
- scrotum
- penis
- prostate gland
- seminal vesicle
- spermatozoa
- male sex hormones



## **The male reproductive system at a glimpse**

### **Testicles (1)**

These, as a rule two, are the main reproductive organs. They produce male sex cells, i.e. semen or spermatozoa and male sex hormones.

### **Epididymis and vas deferens (2 & 3)**

Each testicle is equipped with the epididymis which is a kind of tube connecting a testicle to the vas deferens. Their function is to store, develop and transport sperm cells.

### **Scrotum**

It is a sack-like fold of skin outside of the body in which testicles are located.

### **Penis (4)**

It plays a vital role in sexual acts. It is built in a way that with sufficient blood

flow results in an erection. It conveys sperm cells during ejaculation.

### **Prostate gland (5)**

It's an organ that takes part in producing seminal fluid and in ejaculation.

### **Seminal vesicle (6)**

A paired organ that produces a component of seminal fluid.

### **The spermatozoa**

The male sex cells. Also known as sperm or semen. It contains genetic material.

### **Male sex hormones**

Hormones are substances produced and released by body organs that initiate and control various functions of the human body. Sex hormones take a vital role in human reproduction.

## The male reproductive system in details

### **Testicles**

The main organs of the male reproductive system are the testicles. The male sex cells, called spermatozoa, are formed there. The testicles also produce the male sex hormone, called testosterone. Testosterone influences the development of the reproductive organs and the secondary gender characteristics in men, like facial and chest hair, typical body build and muscle mass.

Each testicle is an oval body, slightly elongated and flattened at the sides. The average size of a grown man's testicle could be compared to the size of a large walnut with its shell on. The left testicle in most men is slightly larger than the right and stands a bit lower. From the outside, the testicle is covered by a dense shell. On the inside of the testicle, there is a layer of loose connective tissue, rich in blood vessels.

### **Epididymis and vas deferens**

Each testicle is connected to a system of drainage ducts that includes the epididymis, located in the scrotum, and the vas deferens, which enter the small pelvis through the inguinal canal. In these ducts the formation of spermatozoa takes place, and some of the components of the seminal fluid are produced and stored. Through the ejaculatory passage, the seminal fluid enters the urinary duct and from this section onward, its path is shared with that of the urine. When the seminal fluid is ejaculated, the secretions



of the accessory glands, like the seminal vesicle, prostate gland, etc., are added.


### **Scrotum**

The testicles are located in a dedicated fold of skin called the scrotum, which is located in the lower part of the pubic area. They are located outside the body because the optimal temperature for sperm formation is lower than the temperature in the abdomen. During the development of a male fetus in the womb, the testicles gradually descend into the scrotum and by the end of the ninth month, the scrotum takes its permanent position.

Various reasons can cause the testicles to remain in the body after childbirth. This condition is known as cryptorchism and is very insidious because if not recognized and treated in time, it can lead to sterility.

### **Penis**

The penis is the organ that performs the sexual act. It consists of three main parts: root, body and head. The root is attached to the pubic bones. The body of the penis has a cylindrical shape, slightly flattened above and below. It consists of two hollow bodies and one spongy body. These structures are essential for achieving an erection. The size and the hardness of the male penis change depending on the blood filling the cavernous spaces. The sexual function of the penis can be realised only after filling the cavernous



spaces with blood, during which the penis acquires a firm consistency and stands up - this state is called an erection. The head of the penis is located at its front end. It has a conical shape with a rounded tip with an external opening of the urinary canal.

It is important to know that the size of the penis and the presence of an erection are not proof of male fertility. Only a test, called seminogram, can determine if there are problems with fertility.

### **Prostate gland**

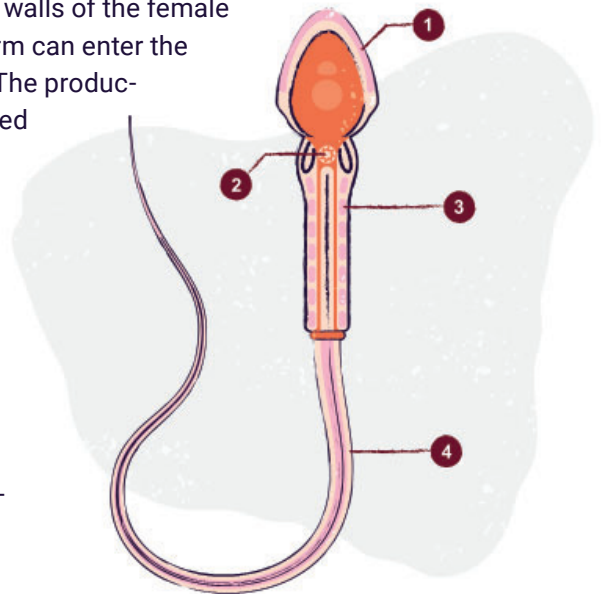
The prostate gland is an organ with a dense consistency and the shape of a chestnut, which is located immediately below the bladder, covering the beginning of the urinary canal. This organ produces part of the seminal fluid, giving it a characteristic smell. During ejaculation, the muscles contract and squeeze the contents into the urethra, where it mixes with the seminal fluid coming out of the ejaculatory ducts. The final development of the prostate gland occurs after puberty, and in old age reverse development of the gland occurs.


### **Seminal vesicle**

The seminal vesicle is a paired organ, located on the surface of the urinary bladder. This is a glandular organ – it produces one of the components of the seminal fluid.

## **The spermatozoa**

The sperm is the male sex cell, which is very small. It consists of a head<sup>1</sup>, a neck<sup>2</sup>, a connecting part<sup>3</sup> (containing mitochondria that provide the energy for its movement), and a tail<sup>4</sup>. In the head is the cell nucleus - pronucleus, surrounded by a thin layer of cytoplasm. It contains genetic material. The sperm moves by rhythmic movements of the tail into the female genital tract at a speed of about 3 mm per minute. The head of the sperm contains enzymes that can break down the walls of the female egg so that the sperm can enter the egg and fertilise it. The production of sperm is called spermatogenesis, it takes about 60 days and happens in the testicles. The sperm cell production starts at puberty and decreases with old age. The average life cycle of spermatozoa is 3 months.





The fertilising abilities of sperm can be greatly impaired by smoking, alcohol use, drugs, certain medications, anabolic steroids, radiation, and certain environmental factors.

## **Male sex hormones**

Thanks to the male sex hormones, men have a functioning reproductive system and develop their secondary gender features. These hormones are known as androgens and are secreted by the testicles.



### *Things to remember:*

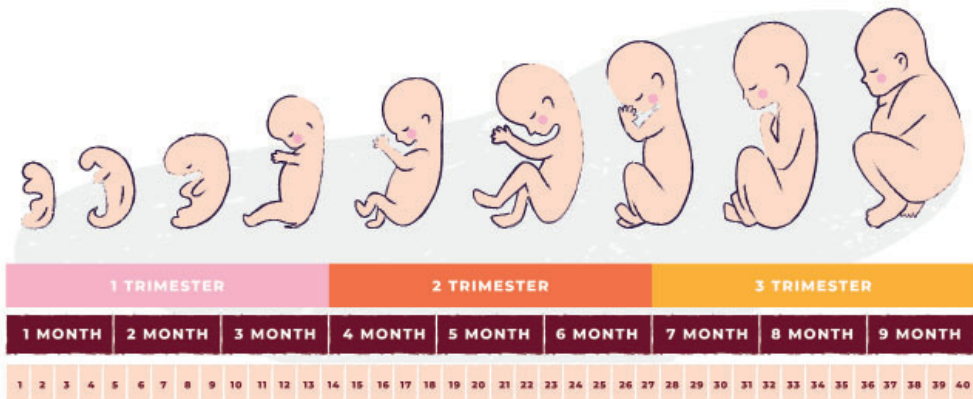
- » Testicles produce the sperm
- » The sperm production takes 3 months and is adversely affected by the use of alcohol, tobacco and drugs
- » The penis size and erection are not proof of male fertility





CHAPTER 4

**From cell to birth  
- the future baby's  
development**



After the egg is fertilised by a single sperm, a new cell called a zygote is formed. The future baby will develop from this single cell. During the first 3 months of its development, we call it an embryo.

The embryo begins its development with the division of the zygote and this happens already in the fallopian tubes. The number of cells rapidly increases - the zygote first divides into two cells, then each of these cells divides into 2 more, forming a 4-cells embryo, then 8 cells, and so on. At this stage of development, the embryo looks like a

mulberry fruit and is called a morula.

**On the 5th day** of embryo development, a single-layer bubble is formed. It's called a blastula. It moves to the uterus and, approximately on day 6, is embedded in the lining of the uterine wall. For the embryo to implant, the uterus should be "hospitable" - the walls must be prepared by the female hormones to receive the embryo. After implantation, the embryo begins to feed from the woman's body. There are two types of blastula cells. Some of them will build the fetus, and others will develop the outer and



inner shells. The outer shell will form the placenta, and the inner shell will make a bag of amniotic fluid around the embryo, which allows it to swim and protects it from mechanical shocks. The placenta is fully formed by the 4th month after fertilisation. Thanks to the placenta, the embryo, and later on the fetus, receives the necessary nutrients and oxygen from the mother's blood through the umbilical cord. The umbilical cord connects the future baby with the mother and contains one vein and two arteries.

When, for some reason, the process of embryo movement through the fallopian tube is affected, the implantation can occur in a place other than the uterine cavity - then an ectopic pregnancy occurs. This is a life-threatening condition and requires immediate medical attention!

During the next few weeks after fertilisation, the cells of the embryo continue to divide and form a double-layered cavity. This is how the first embryonic layers are formed - outer and inner, and later a middle embryonic layer develops between them. The cells of the outermost layer will form the epidermis, the brain and the nerves. The innermost layer will develop the digestive system, the liver, the pancreas, the lungs and the trachea. Bones, muscles, heart, blood vessels, blood, kidneys, and gonads are formed from the middle layer.

**1 month** after fertilisation, the embryo is the size of a grain and continues to develop. Different types of cells and tissues are formed and begin to develop the organs.

Various environmental and lifestyle factors can adversely affect the development of the baby, therefore it is important for a pregnant woman to avoid the use of certain medications, alcohol, drugs, to protect herself from radiation and exposure to toxins.

**2 months** after fertilisation, the embryo resembles a human being and already differs from the embryos of other mammals. It has a large head, small limbs and a pelvis. From this period onwards, the embryo is called a “fetus” and develops very rapidly.

During the **3rd month** of pregnancy, almost all muscles, organs and nerves are already functioning. The cartilages of the future bones develop and in the following weeks will begin to form the skeleton. The future baby can swallow amniotic fluid, process it and return it by urinating into the amniotic sac.

In the period from 11 to 13 weeks of pregnancy, a combined (ultrasound and biochemical) screening for chromosomal abnormalities of the fetus should be done.

During the **4th and 5th months** of pregnancy, the movements of the fetus can be felt by the future mother. The face of the fetus increasingly takes on a human shape. The first hair and fingernails appear and the gender can be seen on ultrasound. The kidneys and oesophagus are formed. The three small ossicles of the middle ear begin to form. The baby can hear the first sounds, although unconsciously, so it's best to avoid loud noises. It can also react to strong light.

During the **6th month**, the nervous system develops fast. The brain begins to control all processes in the body, hearing and seeing are activated. Muscle coordination strengthens. The baby's bones form quickly and strengthen, so it is very important to provide enough calcium and iron through a healthy

and balanced diet of the future mother. In this period of pregnancy, the doctor may prescribe blood tests for anaemia, and may also recommend an additional specialised examination of the fetal heart, called fetal echocardiography, by a pediatric cardiologist.

In the **7th month**, the lungs are ready for breathing, and, in case of premature birth, the fetus can survive outside of the woman's body. At this stage of pregnancy, it is very important to test the levels of blood sugar of the future mother and to do a screening for gestational diabetes. This is one of the most common metabolic diseases during pregnancy, which causes an elevated level of sugar in the blood and can have serious short-term and adverse long-term effects on the baby and mother.

During the **8th and 9th months**, the fetus continues to grow and all organs are now fully developed and able to perform the necessary vital functions outside the mother. In the last 4 weeks, the weight of the fetus almost doubles, accumulating fat tissue.

At last, **by the end of the 9th month**, the separation of the fetus from the mother's body starts under the influence of female hormones. This process is called birth. After the birth, the baby can now breathe and feed on its own. A new human being is born.



### *Things to remember*

- » The pregnancy lasts about 9 months and is divided into 3 trimesters
- » The first 3 months of the pregnancy are the most critical for the development
- » Regular medical check-ups should be performed
- » It is essential to eat healthy and balanced food





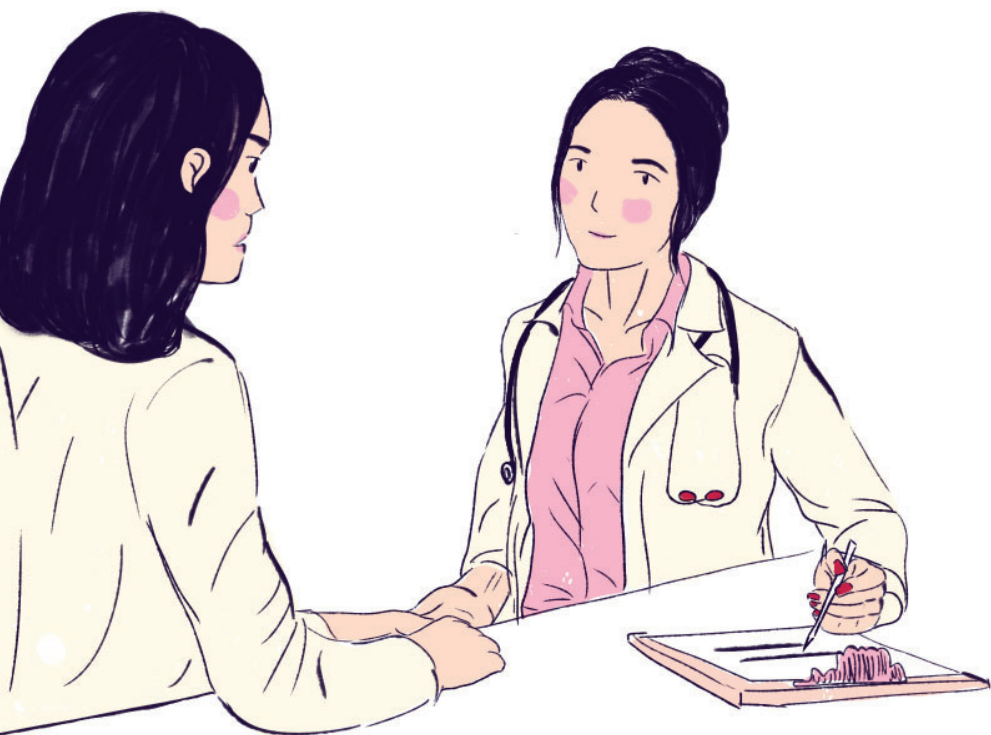
CHAPTER 5

# **I want to be a Mum - where do I start?**

Pregnancy is a unique state and it is worth preparing well for. The better your health condition is, the greater the chance that you will see a positive pregnancy test in the coming months. Your health will also affect the course of your pregnancy. Check your general health, and be cautious of what you eat and how you live. Maybe it's worth making some changes?

## See your doctor for a checkup

When seeing your gynaecologist it's best to inform them about your plans. The doctor will proceed with a medical interview and most probably examine you or do an ultrasound. During the conversation with the doctor, tell them everything that may be worrying you, e.g. irregular cycles,





painful periods, spottings. You can also discuss how your menstrual cycle works and on which days you have the best chance of getting pregnant.

The doctor may also refer you for additional check-ups. One of them will be a cervical screening (smear test) - it is a very important screening test in the prevention of cervical cancer. Every woman should do it regularly. They may also refer you for further examinations, depending on your condition and recommend appropriate supplementation.

## **Do medical tests and get vaccinated**

Before getting pregnant, doing various tests and health checkups is important to ensure a healthy pregnancy. Apart from cervical screening, other tests worth considering are breast scans, blood tests, and urine tests to rule out infections. Thyroid tests are also crucial as thyroid hormones may affect the chances of getting pregnant. Check your immunity to childhood infectious diseases such as rubella and chickenpox and get vaccinated if necessary. Toxoplasmosis, cytomegalovirus, and infectious diseases of the liver are also serious threats to pregnancy and the developing baby. Lastly, make sure to get vaccinated against COVID-19 before trying to conceive and follow your doctor's advice on vaccination guidelines before and during pregnancy.

## Supplements

If you are healthy, you will not need to take special vitamin supplements in preparation for pregnancy. The exception is supplementation with folate which is very important for the proper development of the fetal nervous system. It also minimises the risk of premature birth and miscarriage. In healthy women, the daily dose of folic acid should be 0.4 mg. It is best to start supplementation as early as 3 months before the planned pregnancy or at the latest 4 weeks before conceiving. Additionally, your doctor may advise you to take supplements if your test results indicate deficiencies, or in the case of certain medical conditions.

## Visit the dentist

Although a visit to the dentist is usually not associated with pregnancy, it is extremely important for its safety. Untreated dental problems can cause premature births and even miscarriages. Therefore, it's wise to check oral health and treat any cavities before getting pregnant.

## Eat well

What we eat has a significant impact on our health and fertility. That's why it's important to pay special attention to what we eat when trying to conceive.

It's best to have as many vegetables as possible on our plates - in a healthy diet, they should make up to half of each meal. The other half should be carbohydrates and proteins. Swapping white pasta for whole wheat

pasta, groats or brown rice and replacing white bread with wholegrain, wholemeal or rye bread has proven benefits to our health.

Also, try to include fish in your diet. It should be eaten at least twice a week, preferably roasted or steamed. Canned fish can also be consumed from time to time. Reduce red meat (pork, beef, lamb) - there should be as little of it in your diet as possible.

Plant-based proteins are an important component of a healthy diet. Most vegetable protein can be provided by eating beans, lentils, chickpeas or tofu.

A healthy diet is not just about the right food. Providing our bodies with a sufficient amount of water is essential. It is best to replace sweetened drinks and juices with water. As a rule, we should drink 2-3 litres of water a day depending on our weight.



Highly processed food, e.g. fast food, crisps or ready-made confectionery products should be avoided. They contain unhealthy fats that are poor for health and fertility.

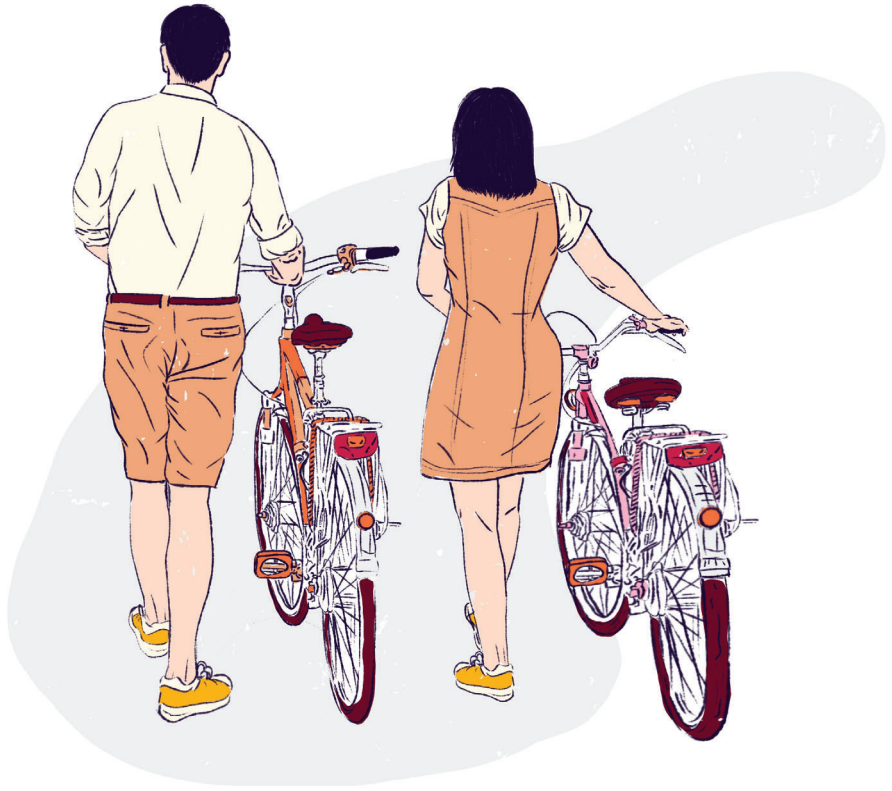
Also sugar intake should be reduced. It's best to skip highly-sweetened sodas and energy drinks. Fruit or good home-made cakes are always best when we crave something sweet.

## **Stop smoking and drinking alcohol**

Giving up cigarettes and alcohol is crucial during preparation for pregnancy. Smoking greatly reduces the chances of getting pregnant for both men and women. It can cause damage to eggs, sperm, and the lining of the womb. Alcohol consumption should also be limited as it can lead to irregular cycles, low-quality mucus, and reduced sperm quality and erectile function. It's important to remember that even e-cigarettes and tobacco heaters are harmful. Quit smoking and limit alcohol intake when trying to conceive.

## **Be active**

Moderate physical activity is important for a healthy lifestyle when trying to conceive. It shouldn't be too intense as this could interfere with the ability to conceive. Find activities that you enjoy. Everyday habits also count, like biking to the shop or getting off the bus at an earlier stop to take a little walk. Meeting a friend for a stroll instead of meeting in a cafe can also positively influence your health.

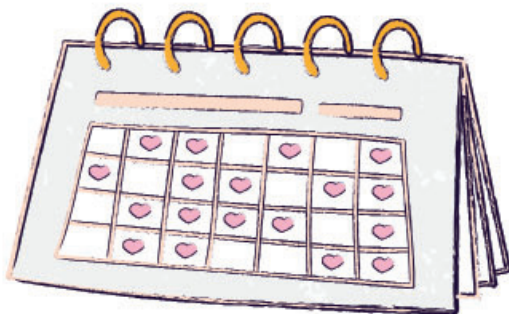


## **Keep up a healthy weight**

A healthy diet and physical activity are essential for maintaining a healthy body weight. A healthy weight is important to increase the chances of getting pregnant. Both being overweight or underweight can cause many health issues that may adversely affect the chances of conceiving. This applies to both women and men. If you are not sure whether your body weight is right, talk to your doctor or dietician about it and follow their advice. A healthy diet and moderate physical activities are key.

## Have sex. And enjoy it!

When trying to conceive, it is important to know when and how often to have sex. The days around ovulation are when the chances of getting pregnant are highest. They are not always easy to recognise. Therefore, make love regularly, optimally about 3-4 times a week and near the time of ovulation every day or every other day, especially when you feel like it the most. We usually have the highest sexual drive on fertile days.



## What if it doesn't work?

Trying to get pregnant can take up to 12 months. This is the time when most couples trying to conceive become pregnant. However, if you have been unsuccessfully trying to get pregnant for more than a year, it is worth seeing the doctor and discussing your situation. Your doctor will order additional tests, including hormonal tests and semen analysis.

There are situations when it is worth seeing a specialist earlier. This applies to women who are over 35 years of age and couples with co-existing medical conditions that may affect fertility. These include thyroid diseases,

endometriosis, PCOS, diabetes and testicular diseases. In such cases, a visit to a specialist is recommended after 6 months of trying to conceive.



***Things to remember when trying for a baby:***

- » see your gynaecologist
- » do necessary tests and check whether your vaccinations are up to date
- » start taking folic acid
- » see your dentist
- » eat healthily and drink enough water
- » quit smoking and reduce alcohol consumption
- » be active
- » maintain healthy body weight
- » have unprotected sex regularly and enjoy it
- » see a medical specialist after a year of unsuccessful attempts to get pregnant





CHAPTER 6

**Why are we not  
pregnant and what can  
we do about it?**

## Trying to conceive

If you've been trying to conceive for a while, each month you're probably anxiously waiting for the day you can take a pregnancy test. It can be an emotionally challenging experience.

The anticipation and uncertainty can manifest itself in a range of emotions, including excitement, disappointment and anxiety, repeatedly cycle after cycle...



## When things don't go as planned...

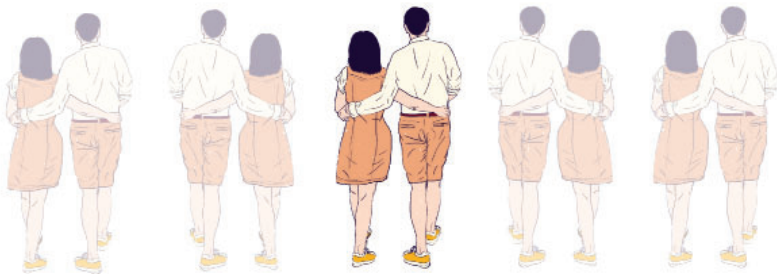
For some people, it doesn't take long to conceive, but for others, it can take months or longer, if at all. The amount of time it takes to conceive depends on various factors, including age, co-existing medical conditions, and lifestyle choices.

If you have been trying to conceive for more than several months without success, you may feel frustrated and discouraged. The constant disappointment of negative pregnancy tests can be overwhelming. Prolonged efforts to conceive can also impact your mental health, leading to depression or anxiety disorders. You may be experiencing infertility.

It can be challenging, but it's important to seek specialist help and explore all available options. Fortunately, medical science today has various ways to help you get pregnant. It is very important to seek medical help on time. With the right support and care, many people can successfully conceive and experience the joy of parenthood.

### Am I the only one?

For many people, trying to conceive can be a long and difficult journey. Actually, 1 in every 6 couples experiences fertility problems. In the European Union alone, there are 25 million people facing the same issue and you are not alone.



## **Couples' (in)fertility**

Women and men face fertility problems equally. Sometimes people mistakenly think of infertility as a woman's issue, while male fertility problems are just as common as female fertility problems.

The cause for infertility could be female or male reproductive issues or both. It is important to know that infertility in women and men occurs equally globally.

## **Why can't we get pregnant?**

Pregnancy is possible when a sperm from a man fertilises an egg from a woman. However, there are many reasons why it doesn't happen despite regular efforts. It can be very frustrating and overwhelming and, understandably, you may start wondering why you are not getting pregnant.

There are a lot of possible reasons why you or your partner might not get pregnant. It could be because the female body doesn't release an egg, the reproductive system has some physical irregularities, the male partner's sperm count is low, there are underlying medical conditions, or you're just not having sex at the right time, or often enough.

## Here are some possible reasons why the pregnancy doesn't happen

### Are you trying at the right time and for long enough?

If you're trying to get pregnant, it's important to consider how long you've been trying. Don't get discouraged too soon, as it can take up to 6-12 months for many couples to conceive. 8 out of 10 couples conceive after six months of trying, and 9 out of 10 are pregnant after a year of trying, as long as they're having regular and well-timed sex each month.

### Do you know when ovulation is?

Ovulation is the process of releasing an egg from an ovary, typically once a month. It is helpful to know the approximate ovulation

day for better timing of intercourse. You can use an ovulation test or consult your gynaecologist to determine when the ovulation is happening.

### Have you used birth control pills until recently?

Fertility can restore slowly after taking some contraceptives. It may take a few menstrual cycles to get pregnant after getting off the pills.

### Do you have any underlying medical problems?

Male and female infertility can be caused by several medical conditions such as hormonal imbalance, diabetes, autoimmune diseases like lupus and others. Mental health conditions like anxiety and depression can also play a role when trying to conceive.

## **Lifestyle Factors**

Smoking tobacco, excessive alcohol intake or drug use, and extreme or chronic stress can disrupt fertility. Additionally, being overweight or underweight may reduce the rate of conception.

## **Age-related infertility**

For women after the age of 35, it becomes more difficult to get pregnant. Many people assume that regular menstrual cycles are an indicator of fertility, but this isn't necessarily true. Age impacts egg quality as well as quantity. Male fertility also declines with age but to a lesser extent.

## **Female reproductive problems**

Some common causes include polycystic ovary syndrome (PCOS), endometriosis, blocked fallopian tubes, and premature ovar-

ian failure. Lack of ovulation is a common cause of female infertility.

## **Male infertility**


It takes both partners to conceive. Male infertility is usually not noticeable without a semen analysis. Ensure both partners get tested for potential fertility issues and let the doctors know you're trying to get pregnant.

## **Unexplained Infertility**

In about 10% of couples, the cause of their infertility remains unknown. However, these couples can still receive efficient fertility treatments.

## **Secondary Infertility**

We talk about secondary infertility when a couple has had one pregnancy (or more) but can't conceive subsequently. Secondary infertility happens to many



people and is even more common than primary infertility - a condition when a pregnancy has never been achieved. Even if you already have a child, secondary infertility can still be very difficult to cope with.

## **Seeking medical help**

If you're having difficulty conceiving or carrying a pregnancy to term, there is help. See a medical fertility specialist to find out if you have fertility issues. Whether you are trying to get pregnant for the first time, hoping to conceive after a miscarriage, or you've been pregnant before but are having difficulty conceiving now, your doctor can evaluate for fertility problems and treatment.

## **When should I seek help?**

If a female is under the age of 35 and has been trying to conceive for a year or more without success, it's time to seek medical help.

If a female is over the age of 35, it's important to seek medical help earlier - after 6 months of trying without success.

Seeking help in time is essential. A doctor can run a series of tests to find out why the pregnancy doesn't happen. There is a good chance they will find the cause of fertility problems and recommend treatment options. These may include lifestyle changes, medications, or medically assisted reproduction procedures.

It's good to remember that infertility is a medical condition that can be treated. Seeking help is a sign of strength, not weakness.

You should not delay diagnosis and treatment for infertility hoping that trying to conceive for a little longer will eventually work. People may delay diagnosis because they appear to be in good health. Even if you have regular menstrual cycles or you have fathered a child before, it does not rule out the possibility of a fertility problem. Some causes of infertility are not obvious and can worsen over time. Seeking help early increases the chances of successful fertility treatments...





### *Things to remember*

- » The time it takes to conceive can depend on various factors, including age, various medical conditions, and lifestyle choices.
- » There are many people facing problems with infertility, you are not the only one.
- » Infertility affects women and men equally all over the world.
- » It is very important to seek medical help on time. With the right support and care, many people can successfully conceive and experience the joy of parenthood.
- » If a female is under the age of 35, it's important to seek medical help when trying to conceive for a year or more without success.
- » If a female is over the age of 35, it's important to seek medical help earlier - after 6 months of trying without success.
- » Infertility is a medical condition, and seeking medical help is a sign of strength, not weakness.



CHAPTER 7

**Diagnosis and  
treatment of male  
infertility**

If you are a man of reproductive age willing to conceive a child and having regular unprotected sexual intercourse, but you haven't achieved pregnancy for more than a year, it is time to see a doctor. You can visit a specialist even earlier if you have any underlying medical condition, or are worried about your health. Together with the doctor, you will try to find out the reasons for the lack of pregnancy, how these obstacles could be treated and removed, and what else can be done if treatment is not possible.

## **Diagnostic steps**

### **1. General checkup**

The reasons for the lack of pregnancy are equally contributed by male and female factors, however, infertility diagnosis should start with the male partner because it is usually quick and easy.

During the first meeting with a male reproductive health specialist, you will be asked about your health, age, and sexual practices and an assessment of the risk factors will be made. The doctor will ask about your medical history, such as surgery, trauma or disease (past or present) in the testicles, pelvis and spine, as well as other health conditions (diabetes, high blood pressure, anaemia, mental problems) and what medications you are taking. You will discuss your lifestyle, occupation, smoking and use of drugs, anabolic steroids and large amounts of alcohol. If you have any complaints – like pain in the testicles, burning sensation when urinating or discharge from the

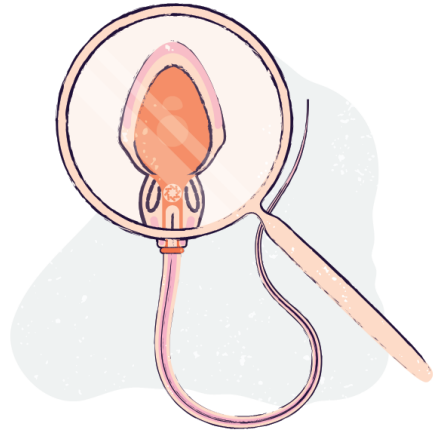
penis, it is good to share this information with the doctor. Last but not least, the doctor will measure your height and weight and will calculate your body mass index. Your family history of hereditary diseases is also important, as well as whether you have had any genital diseases in childhood. You can prepare the information in advance by asking your parents and collecting documents from any previous medical examinations, treatments or surgical reports. The more data you provide about yourself, the easier it will be to clarify why you are unable to conceive a child.

There is no shame in seeking qualified medical help for fertility problems. Diagnostic procedures do not pose risks to your health, and the earlier a disease is detected, the higher the chance of successful treatment.

After this initial evaluation, the doctor will schedule some additional examinations and tests.

## **2. Seminogram**

The first laboratory test is called a seminogram or semen analysis. It is done in a specialized laboratory and represents an assessment of the amount, motility and quality of your sperm. Before this test, you must abstain from sex and alcohol intake for 3 to 5 days. In the lab, you will be asked to masturbate in a sterile container. There is a dedicated room for this purpose. If for some reason this procedure is not suitable for you, you can collect the sample at home and take it to the laboratory within 1 hour, while keeping it at room temperature. You will receive detailed instructions and a container from the specialists before the sample is collected.



The seminogram indicates the semen parameters in relation to the reference values of sperm. If the results of the first seminogram are not within the referenced range, a repeated seminogram and additional tests should be prescribed.

If you have a severely reduced sperm count, a lack of sperm, or other serious irregularities in sperm motility and

quality, your doctor will advise you to undergo genetic testing, as some men are born with a chromosomal mutation that results in a missing or mutilated process of sperm production. For these tests, a blood sample will be taken.

Male infertility amounts to about half of fertility cases in a couple. Semen analysis is very quick, easy, painless and cheap, therefore, doctors always advise to start the diagnosis of infertility with a male partner.

### **3. Urology examination**

In the course of diagnosis, you will also be examined by a urologist. The purpose of the examination is to evaluate the secondary genital characteristics – body hair, muscle mass and - if applicable - type of obesity and scars from previous surgeries. The specialist will examine your penis for the build and position of the external urethral opening, your testicles for position, size, density, and presence of formations; and your epididymis and vas deferens. After that, the doctor will use an ultrasound to assess the blood supply to your genitals and to check for the presence of varicose veins around the testicles (varicocele).

#### **4. Blood tests**

An assessment of your endocrine system should also be done by testing some important hormones. If necessary, your doctor will consult an endocrinologist, who will examine your thyroid gland with ultrasound and will decide whether you need further tests. In addition, all men planning to start a family should be checked for infections. These are tests for sexually transmitted diseases, and in certain cases for other microorganisms. This can be done by testing samples of blood, semen, urine or urethral discharge.

Good diagnosis is the foundation of successful treatment. The stages of diagnosis should not therefore be skipped and no fertility treatments should be carried out before trying to determine what are the causes of infertility.



## Treatment

After these diagnostic steps, you will have clarity about any fertility issues and how your chances of conception can be improved. This can be done in several ways, which can be applied alone or in combination.

### Changes in lifestyle

You can make changes in your lifestyle, giving up harmful habits, improving weight, physical activity, nutrition and general health.

### Medications

Medications can be prescribed to improve the quantity and quality of

sperm, regulate the work of the endocrine system, and treat infections or other common diseases. Medications and dosage are tailored to the causes of any fertility issues that you may have.

### Surgical treatment

In some cases, surgical treatment may be required, for example, if you have cysts or tumours on the testicles or epididymis, as well as varicocele.

After the surgery, the doctor will order a new seminogram and additional tests to assess the outcome of the treatment.

Avoid self-medication and do not exchange medicines with other people. Treatment is personalized for you, and medications and doses are tailored to your specific needs.

## Medically assisted reproduction

By following this approach to diagnosis and treatment, about 85% of men with fertility issues succeed in becoming biological fathers. If this doesn't work, the next step is to turn to medically assisted reproduction methods such as insemination (IUI) or in vitro fertilization (IVF). During these procedures, your sperm will be processed and placed into your partner's uterus or used to fertilise her eggs in a laboratory setting. In some cases, e.g., if you are undergoing chemotherapy or radiotherapy for cancer, you may need to freeze samples of your sperm before the treatment.

In cases of severe damage to the processes of sperm formation and development and in the absence or blockage of the vas deferens, you may be offered a surgical procedure (puncture or biopsy) to obtain sperm from your testicles or epididymis. This procedure is performed under general anaesthesia.

Sometimes, no improvement can be achieved despite the treatments offered. In these cases, the doctor will discuss the option of using donor sperm. Adopting a child is another option.



### *Things to remember*

- » The reasons for the lack of pregnancy are equally distributed between the male and the female
- » There is no shame in seeking qualified medical help for fertility problems
- » Only the seminogram test can determine whether everything is OK with your sperm
- » In the vast majority of cases, modern medicine can offer adequate and successful treatment of male fertility problems.



CHAPTER 8

**Diagnosis and  
treatment of female  
infertility**

Diagnosis is the first step in overcoming the problem of infertility. Correct diagnosis saves time - a key factor in this process. The sooner the cause of infertility is identified, the greater the chance of successful treatment. Correct diagnosis leads to adequate therapy for a specific cause of infertility.

This journey is sometimes long. Infertility is invisible and often people do not suspect that they might have fertility problems. They try for a baby for months or even years with no result. Therefore, it is important to remember that after 1 year of unsuccessful attempts to conceive, it is time to see a fertility doctor. After having chosen a trusted specialist, the doctor will propose an action plan for diagnosis. As mentioned before, it should start with the male partner as in most cases initial tests are quick and easy. In this chapter, we will focus on the diagnosis of female infertility and the correct steps for diagnosis and the recommended treatment.

The financial factor in infertility treatment should not be underestimated – sometimes the treatments can be quite expensive. If the diagnostic steps are followed correctly, a number of expensive tests and interventions can be avoided.

## Initial examination

The search for the causes of female infertility will start with the evaluation of the physical and health condition. The doctor will ask questions about the menstrual cycle. In women facing infertility, it is very often irregular or absent. The doctor will also ask about previous illnesses, especially those related to the reproductive system. It is important to share detailed information about previous births, abortions or surgical procedures. Sometimes the cause of infertility is a genetic condition, so the doctor will ask if there are any relatives with fertility issues.

After that, the doctor will conduct several tests and will perform a gynaecological examination.

## Diagnosis

Based on this examination, the doctor draws up an action plan, which, depending on the woman's condition, may include the following diagnostic steps:

### **1. Microbiological tests, cervical smears and other tests**

These tests give the doctor the most general direction for future diagnosis and treatment. The microbiological tests check for infections, sexually-transmitted diseases or inflammations that need to be treated. It is essential to check for chlamydial infection because it causes damage to the fallopian tubes. Additional blood and urine tests may be ordered too.

## **2. Ultrasound check of the ovaries and their function**

Ovulation is necessary to achieve pregnancy. Your doctor will use ultrasound scans to monitor follicle development and ovulation during one cycle. This will help to determine whether ovulation is happening spontaneously or needs treatment with nutritional supplements or medications.

## **3. Hormonal tests**

A significant part of female infertility is related to hormonal dysfunctions. The doctor will order blood tests to check the level of various female sex hormones during the different phases of the menstrual cycle. In addition, the thyroid and some other hormones should also be checked.

## **4. Examination of fallopian tubes**

Tubal patency testing is very important and should be performed before starting any treatment. If the tubes are blocked and can't pass the sperm, conception is not possible without using medically assisted reproduction methods. The reason for blockage should be evaluated and, in some cases, there might be a need for a surgical procedure to remove the tubes.

There are several methods to determine the condition of the tubes, and the doctor will select the most suitable procedure for you. The two most common methods to check the patency of the tubes are X-ray imaging and ultrasound imaging. It is extremely important not to skip this early diagnostic step!



## **5. Diagnostic surgical procedures**

In some cases, it is necessary to resort to surgical interventions to achieve a more accurate diagnosis. This procedure is called a laparoscopy and allows the doctor to take a good look at the internal organs using a small camera. At his discretion and with the patient's consent, actions can be taken to remedy, if a problem is spotted. Laparoscopy is lighter and better tolerated than ordinary abdominal surgery.

## **6. Genetic, immunological studies and other tests**

When the usual diagnostic methods do not provide clarity about the causes of infertility, some additional research needs to be done. For example, in cases of recurrent miscarriages, the cause may be linked to

genetic or immunological problems.

For good diagnosis and better results in treatment, other specialists can be included in the process - geneticists, endocrinologists, immunologists, etc. After the necessary set of diagnostic tests is completed, your doctor will discuss a treatment plan with you and your partner. Time is essential when it comes to female infertility - after the age of 35, a woman's chances of getting pregnant drop significantly, so there is no time to waste.

## Treatment

### 1. Changes in lifestyle

Treating infertility begins with taking care of our bodies. When trying to get pregnant, it is good to get rid of any harmful habits, such as smoking, drinking alcohol, or too much coffee. Excess weight is also an aggravating factor in fertility treatment, so the right nutrition and balanced physical activity may support the process. Working in an environment with harmful substances also interferes with pregnancy, so it should be avoided by women trying to conceive.

### 2. Treatment of infectious, hormonal and other diseases or conditions

Diagnosed diseases should be treated. The doctor will prescribe appropriate medications for infectious diseases or will refer you to other specialists if the treatment of accompanying conditions or diseases is required.

If there is a problem with ovulation, which is quite common, hormonal therapy might be used to stimulate follicles to grow and release an egg.

There are many nutritional supplements and medications on the market that claim to help conception. It is important to remember that these could have some adverse effects and should only be taken after consulting a doctor and after the full diagnostic process has been completed. For example, ovarian stimulation drugs should not be prescribed without checking the fallopian tubes patency and the quality of sperm first.

### **3. Surgery**

Sometimes gynaecological surgery is required. Modern gynaecological surgical operations are less painful and easier to recover from.

### **4. Insemination**

If the female partner is over 35 years of age, doctors could recommend starting with medically assisted attempts to get pregnant. Of course, this should be done after a thorough diagnosis and when infectious or other diseases that may hinder success have been treated.

Insemination (IUI) is a fertilisation procedure, carried out in a medical setting. Doctors take sperm from the man, process it, and using medical instruments, transfer it directly into the woman's uterus. Insemination is done to allow more

sperm to reach the egg. Processed semen contains significantly more sperm than semen released during normal sexual intercourse. The doctor may prescribe medical drugs to induce the development of a follicle or more than one follicle during that menstrual cycle, however, this should be done cautiously to avoid the risk of multiple pregnancy.

The chances of getting pregnant with insemination are between 6 and 20% per cycle, depending on the number of follicles developed in that cycle and the sperm count. The insemination performed in a cycle with more than one developed follicle increases the risk of multiple pregnancy.

### **5. In vitro fertilisation**

For a small percentage of couples, the aforementioned treatment methods may not succeed. In such

cases, medical specialists could offer an in vitro fertilisation procedure (IVF). This is a fertilisation procedure that takes place outside the woman's body in a controlled medical environment. To perform IVF, it is necessary to obtain sex cells from the man - sperm, and from the woman - eggs.

For a higher success rate of in vitro fertilisation, it is necessary to stimulate the woman's ovaries to mature more follicles - this is done with the help of hormonal therapy prescribed and monitored by a reproductive specialist. Once a sufficient number and size of follicles is achieved, medical professionals proceed with the process of egg retrieval.

The processed sperm and the eggs are fertilised in a laboratory environment and the resulting embryos are developed between 2 and 5

days outside the woman's body. Then, preferably a single embryo is returned to the woman's uterus. This procedure is called embryo transfer. 10 days later, a pregnancy test is performed to determine if a pregnancy has been achieved. Surplus embryos can be cryopreserved (frozen) for future use.

The success of in vitro procedures is influenced by many factors, but the most important is the age of the woman. On average, the chance of success is 35-40% if the woman is under 35 years of age and then the chances significantly drop. After the age of 45, the chance of getting pregnant with a woman's own egg is nearly zero.



### *Things to remember*

- » Modern medical science provides excellent results in the diagnosis and treatment of female infertility.
- » That's why it is very important not to delay seeking medical help when facing infertility.
- » It is important to find a reproductive medicine specialist and follow all the diagnostic steps.
- » If you are over 35 years of age and want to conceive, seek medical help after 6 months of trying.
- » Female age is crucial for fertility. Do not delay your pregnancy.



CHAPTER 9

**Pregnancy and  
parenthood after  
infertility**

## The two-week wait

The two-week wait is the time after which a pregnancy test can, at last, be done to find out the outcome of the fertility treatment. This wait might be an anxious and stressful time for you, as most people nervously count down the days until they can take a pregnancy test.

During the two-week wait, it's best to take good care of yourself and try to manage stress. This can include getting enough rest, eating a healthy diet, and engaging in stress-reducing activities such as meditation, nature walks, or anything that you find relaxing.

Some women may experience symptoms during the two-week wait, such as cramping or spotting. These symptoms are most often not related to, or not indicative of pregnancy.





## **A positive pregnancy test**

For women who have undergone a medical procedure to become pregnant, seeing a positive pregnancy test could be the most exciting and emotional moment.

If your pregnancy test is positive, contact your doctor and ask about what are the next steps. Your doctor may recommend additional testing, such as blood tests or ultrasound, to monitor the progress of the pregnancy.

Sadly, not all positive pregnancy tests will lead to a baby. In some cases, the embryo may implant but may not develop properly, resulting in an early miscarriage. Very early loss of pregnancy is not rare and could happen in 1 of 3 pregnancies. Sometimes, the embryo may implant outside the uterus. It is called an ectopic pregnancy and it is a serious medical condition.

## **Testing the beta-hCG hormone**

Testing the beta-hCG hormone is an accurate way to determine if a woman is pregnant. This hormone is produced by the placenta after implantation and can be detected in a woman's blood or urine. This hormone is absent in your body if you are not pregnant, so if the blood test indicates its presence - it's almost certain that you are pregnant. The home urine pregnancy tests also test this hormone, but less precisely.

Doing consecutive tests for beta-hCG hormone and checking its level can tell about the progress of the pregnancy, or can indicate how far along the pregnancy is.

A beta-hCG hormone test can also be used to monitor for complications, such as ectopic pregnancy when the embryo implants outside the uterus.

If you suspect you may be pregnant or have concerns about your pregnancy, talk to your doctor about the testing options.

## **First pregnancy checkup**

Your first pregnancy checkup is very important. During this examination, your doctor will check your overall health and monitor the health of your pregnancy.

Your doctor may ask questions about your medical history, administer urine tests and perform a physical exam, including checking your weight and blood pressure. They may also perform a pelvic exam to check the size and shape of your uterus.

Depending on how far along you are in your pregnancy, your doctor may also order blood tests and an ultrasound to check the development of your future baby.

Your first pregnancy checkup is a great opportunity to ask any questions you may have about your pregnancy and to discuss your plans for care before birth with your doctor. By working together, you can ensure that you and your growing baby stay healthy throughout your pregnancy.

## How far along are you?

When someone asks “How far along are you?” during pregnancy, they usually ask how many weeks pregnant you are. Pregnancy is measured in weeks, starting from the first day of your last menstrual period.

There are a few different ways to determine how far along you are in your pregnancy. Your doctor will calculate when the due date is. You can also use a pregnancy calculator to estimate how far along you are, based on the first day of your last menstrual period.

Knowing how far along you are in your pregnancy can help you plan for prenatal care, know when will be the time for important checkups, and prepare for the birth of your baby. If you are unsure how far along you are, talk to your doctor for guidance.

## The heartbeat

Hearing the new heartbeat for the first time during pregnancy can be an exciting and emotional experience. The heartbeat is a sign that your future baby is developing and growing in the womb. The heartbeat can usually be detected by ultrasound around 6-7 weeks into the pregnancy. Your doctor may also enable you to listen to the heartbeat during checkups before birth.

The heartbeat is a reassuring sign of normal development, but it’s important to remember that many other factors contribute to a healthy pregnancy. By following a healthy diet, staying active, and seeking regular care before birth, you can help ensure that you and your future baby stay healthy throughout the pregnancy.

## The trimesters

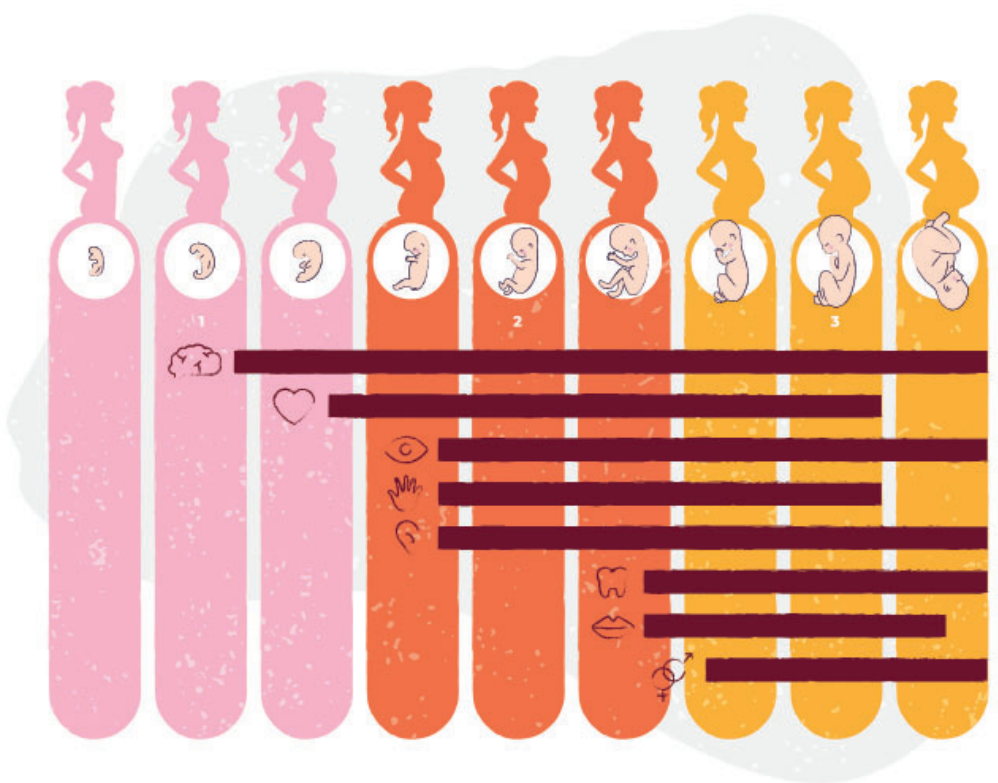
Pregnancy is divided into three parts, each lasting about three months - they are called trimesters. These trimesters help doctors monitor the growth and development of the baby, as well as the health of the mother.

The first trimester is from week 1 to week 12. During this time, the fertilised egg implants in the uterus, and the baby's organs and body structures begin to form. This is the most critical time for the baby's development. In the first trimester, the mother may experience symptoms such as fatigue, nausea, and tender breasts.

The second trimester is from week 13 to week 28. By this time, the baby's organs and body systems have formed, and she or he is growing fast. The mother may feel more energetic and experience less nausea, but may also experience new symptoms such as back pain and heartburn.

The third trimester is from week 29 to week 40 (or until birth). During this time, the baby is growing quickly and putting on weight. The mother may experience discomfort as the baby grows and takes up more space, and may also experience symptoms such as contractions and difficulty sleeping.

It's important to receive regular care throughout pregnancy and to report any concerning symptoms or changes to your doctor. By monitoring the pregnancy closely and addressing any concerns that may occur, doctors can ensure the best possible outcome for both mother and baby.



## Medications during pregnancy after infertility treatment

Many women who become pregnant after fertility treatment remain very cautious and may wonder if it's safe to take any medication. Since every pregnancy is unique, medication use and dosage should always be discussed with the doctor.

It's important to remember that only medications prescribed by your doctor are safe to use during pregnancy. It's always recommended to consult a medical specialist before resorting to over-the-counter medication. Some medication, such as ibuprofen, are not recommended during pregnancy and should be avoided.

If you are pregnant after MAR and have questions or concerns about any medications seek your doctor's advice to ensure your own and your future baby's safety.

## **Your emotions in pregnancy after infertility**

Pregnancy after infertility can be an incredibly rewarding experience. However, it has to be appreciated as well that the experience of pregnancy after infertility can also be complex and challenging. Many people who have faced problems with fertility may have experienced enormous stress during their journey to conception, which can carry over into the pregnancy itself.

For example, fear and anxiety around the possibility of losing the pregnancy, or experiencing complications, can be high for those who have struggled with fertility issues. The stress and emotional impact of infertility and the burdens of medical treatments can have a negative effect on the joy

of pregnancy and bonding with the growing baby.

It is always good to seek support and find a safe space to talk about emotions surrounding the pregnancy. You can seek the help of a mental health professional or support groups and peer-to-peer online communities.

The experience of pregnancy after infertility is very personal and unique to each individual and couple. Step into that journey with patience and an open mind and seek the support and resources that can help make the journey a joyous experience.

## The child is finally here

Having a child after infertility can be a very joyful experience, but it can also bring new challenges. For many people, the experience of infertility can leave a lasting impact on their emotional well-being and relationships, which can carry over into parenthood.

One common issue that people may experience in having a child after infertility is a sense of anxiety and fear around the health and well-being of the baby. This can lead to high levels of anxiety and alertness around the child, which can impact your ability to fully enjoy and bond with them.

Another issue that people may

experience is a sense of guilt or shame around infertility or fertility treatments. Even though infertility is a common condition that affects many individuals and couples, there can be a sense of stigma or shame attached to it. These feelings of guilt and shame can impact your ability to fully enjoy the experience of parenthood.

Also, the experience of having a child after infertility can come with a sense of pressure to be a “perfect” parent. After struggling to conceive, the desire to provide the best possible life for the child can feel even more pressing. The reality of parenthood can be stressful and overwhelming, leaving the feeling of not being a good enough parent.

Seek support and find a safe space to talk about all sorts of emotions around parenthood. You can find help of a mental health professional or in support groups and peer-to-peer online communities. With the right support, the experience of having a child after infertility can be joyous and empowering.



## **Is infertility over?**

Even after having a child, infertility may not necessarily be “over.” Sometimes you may continue to experience infertility or other reproductive health issues, which can impact future family planning decisions. Also, the emotional and psychological impact of infertility can persist even after having a child. It is important to remember that these issues are common and that you can seek ongoing support and care.



### *Things to remember*

- » After a positive pregnancy test following fertility treatment, contact your doctor and ask what the next steps are
- » Sadly, not all positive pregnancy tests will lead to a successful pregnancy
- » Testing for bHCG hormone levels in the blood is a simple and accurate way to determine if you are pregnant
- » The first pregnancy checkup is important. Your doctor will check your overall health and monitor the health of your growing baby
- » It is essential to know how far along you are in your pregnancy - if you are unsure how it is calculated, talk to your doctor for guidance
- » Pregnancy is divided into three parts which are called trimesters
- » Medication should only be used as your doctor advised during pregnancy - some medications are safe during pregnancy, but some can be harmful and should be avoided
- » The experience of pregnancy after infertility can be complex and challenging - seek out the support and resources that can help you to go through that journey.





CHAPTER 10

# **When treatment is not successful**

## Difficult decisions

Even though medical science is advancing and various fertility treatments are available, sadly, not everyone undergoing treatment will become a parent. When procedures don't result in the desired outcome, the decision of whether or when to discontinue treatment could be very difficult.

One thing to consider when making this decision is the emotional implications that ongoing treatment may have. Stress and anxiety from unsuccessful treatments can impact your mental health, well-being and your relationship. Also, the financial cost could be a true burden to cope with. Fertility treatments are often expensive and can greatly affect your financial situation. The multiple medical procedures also take their toll on a female's body.

Therefore, the impact of ongoing treatments on your

emotional, physical and financial well-being, should be taken into consideration.

## Considering other options

When treatment is not successful, there are other options and alternative paths that you can explore, such as adoption, or living child-free.

Adoption can provide a path to parenthood for those who are unable to conceive. There are various types of adoption and it's worth exploring the options available in your country. Adoption is a complex and emotional process, and you may benefit from seeking the advice of a counsellor, local support group or patient associations, or therapist, to help you navigate this path.

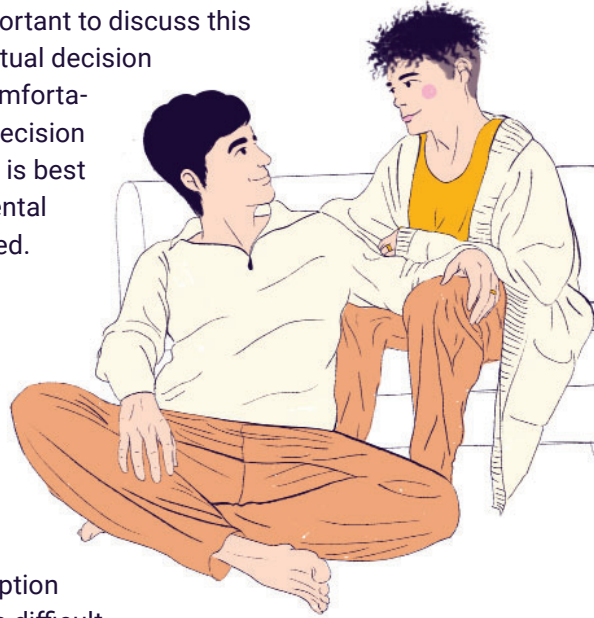
Living child-free is another option for those who are unable to conceive. While it may seem like a difficult decision

to make, it can provide a sense of closure and allow you to move forward and focus on other aspects of your life. For couples, it is important to discuss this option and come to a mutual decision that both partners are comfortable with. Ultimately, the decision should be based on what is best for the emotional and mental well-being of all concerned.

### **How long should you continue trying?**

The decision to discontinue fertility treatments or explore alternative paths such as adoption or living child-free, can be difficult for anyone struggling with infertility. There is no set timeline for making this decision, as every person's journey and circumstances are unique. Take the time you need to make an informed and thoughtful decision.

You can first consider the success rates of the treatment you are undergoing. For example, if you have been undergoing in vitro fertilisation (IVF) and have had multiple unsuccessful cycles, it may be time to rethink your options. Discuss your feelings and concerns with your doctor, as they can provide valuable guidance and insight about the chances of success if you decide to continue treatment.



Take into consideration your physical and mental well-being. Infertility can be a difficult and emotionally exhausting experience, therefore always prioritise your physical and psychological health. If ongoing treatment is causing you undue stress and anxiety, it may be time to explore alternative paths.

It is good to take as much time as you need to make an informed decision that is right for you. For some people, it will take a few months, and for others, it may take years. Seeking support from a counsellor or therapist can also help you navigate this decision-making process and manage the emotional impact of infertility. Ultimately, the decision should be made with careful consideration of your emotional, physical, and financial well-being.

## **End of the infertility journey**

It may come as a relief to no longer undergo the physical and emotional stress of treatment, but it can also bring a sense of grief and loss. The end of treatment may represent the end of a long and difficult journey, and the realisation that you may never have biological children can be difficult to accept.

You may experience various emotions during this time, including sadness, anger, frustration, and disappointment. You may also feel a sense of guilt or shame, particularly if you feel that you have failed to achieve the goal of having a biological child. These emotions are normal and understandable. Your doctor, counsellor, therapist, or peer-to-peer group can offer support and help you deal with these feelings.





Additionally, you may experience a sense of uncertainty and anxiety about the future. You may wonder what your life will look like without children. You may also worry about how your relationship will be impacted. It is always best to communicate openly with your partner and to try and establish new goals and priorities for your life together.

## **You may find the following steps helpful on that path**

### **1. Find sources of joy**

Take stock of the things you are grateful for, and try to find joy and happiness in them. Whether it's your career, your hobbies, your friends, or your partner, many things can bring fulfilment and meaning to your life.

### **2. Take care of yourself**

Take care of yourself both physically and mentally. Infertility can take a toll on your body and mind, so prioritising self-care is important. This might involve eating well, exercising regularly, practising mindfulness, or seeking professional help to work through your emotions.

### **3. Find a purpose**

Find a sense of purpose beyond having children. Whether it's volunteering, pursuing a passion, or setting goals for your career, having a sense of purpose can give you a sense of fulfilment and direction in life.

While the end of fertility treatment can be a difficult and emotional time, it can also be an opportunity to explore new paths. Having a fulfilled life is not solely dependent on having children. There are many ways to live a happy life, and we can all find our own way.



### *Things to remember*

- » When treatment is not successful, deciding whether to continue or stop trying can be a very difficult decision
- » Consider the physical, emotional and financial impact of ongoing treatment and explore alternative paths, such as adoption or living child-free
- » It is good to take any amount of time that you need to make an informed decision that is right for you
- » The realisation that you may never have biological children can be difficult to accept, it can bring a sense of grief and loss, or guilt and shame. These emotions are normal and understandable. Seek support from your doctor, counsellor, therapist, or peer-to-peer group, to help you with these feelings.
- » The end of fertility treatment can also be an opportunity to explore new paths.
- » Having a fulfilled life is not solely dependent on having children - there are many other ways to live a happy life.



CHAPTER 11

# **Psychology of infertility**

## **The impact of infertility on your emotions and mental well-being**

Trying to get pregnant can be an emotional rollercoaster, especially when the journey is not as smooth as expected. Experiencing difficulty in conceiving can lead to a range of complex emotions, like sadness, frustration, disappointment, anxiety, guilt, and even shame. You may also experience trouble concentrating, changes in eating and sleeping habits, and difficulty completing daily tasks. You may feel these emotions very strongly, especially while you deal with the diagnosis and treatment.

The constant disappointment of negative pregnancy tests or unsuccessful treatments can leave you discouraged and feeling helpless. You may begin to question your worth as a partner or even as an individual. These feelings can lead to a sense of isolation and despair.

Dealing with infertility can also impact your social life, as the pressure to have children can lead to feelings of inadequacy around those friends and family who have them. Their children can feel like reminders of infertility and this can be overwhelming. Therefore, it can be truly challenging to attend baby showers, or other family events centred around children. Seeing pregnant women near you, pictures of babies, or listening to conversations about other people's children can also trigger various negative feelings.

These emotions are normal, understandable and valid. Lots of people that face fertility problems share the same

feelings. It gets easier when you recognise these feelings and find ways to cope with them or seek timely assistance. Sometimes, it's hard to talk with family and friends who don't understand your struggles. In such cases, you could consider joining a support group, where you can share your experiences with others who understand what you're going through. Take care of yourself during this difficult time and don't hesitate to reach out for help if needed.



## **How does infertility feel for a couple?**

As the months or years pass without a successful pregnancy, couples may experience anxiety and uncertainty about their future. They may worry about the financial and emotional cost of fertility treatments and the possibility of never becoming parents.

Infertility can put a strain on the emotional connection between you and your partner. One of you may feel responsible for the inability to conceive, while the other may feel helpless or powerless to make things better. This can lead to feelings of resentment, blame, or guilt, which can impact your communication and trust.

The process of trying to conceive can be physically and emotionally demanding. Fertility treatments such as in vitro fertilisation can be costly, time-consuming, and invasive, leading to added stress and pressure on you and your partner.

However, it's important to know that you're not alone and that many people have gone through similar experiences. It's always best to communicate openly with your partner about your thoughts and feelings and explore all available options for treatments. With the right support and care, you can navigate the emotional challenges of infertility and find your path to parenthood.





## **Women coping with infertility**

Infertility is often wrongly perceived as an issue that affects only women. It may result in additional pressure, expectations and even blame. Women may question their identity and self-worth, feeling inadequate or less feminine because of their condition. Experiencing a type of loss that is not clearly defined makes it difficult to handle or even just talk about. Whatever the actual reasons for infertility, women carry the burden of fertility treatments, the physical and emotional demands of which can be overwhelming and exhausting. Undergoing complex, prolonged and invasive treatments can result in changes in appearance which can affect body image and self-perception. Seeking support from loved ones, joining support groups, or seeking therapy, can help you cope with any psychological challenges you may experience.



## Pregnancy loss

Pregnancy loss can have a significant impact on your mental and emotional well-being. It's common to experience a wide range of emotions, including sadness, anger, guilt and anxiety.

One reason for this is that pregnancy loss can challenge your sense of control and expectations for the future. If you have experienced a miscarriage or stillbirth, you may feel like you've lost control over your body and your ability to have a healthy pregnancy. There is also a great sense of grief over the loss of your plans and hopes.

The effects of pregnancy loss can feel very different for different individuals depending on their personalities, coping strategies, and support networks. Some people may benefit from talking to a therapist or joining a support group to process their emotions and find ways to cope with their loss.

Sadly, pregnancy loss is a common occurrence. You have no reason to feel ashamed or alone in your grief. Seeking support from loved ones and professionals can help you navigate this difficult time and eventually find healing and peace.

## Men coping with infertility

Men also feel a sense of shame, inadequacy, and loss when they face infertility. In traditional cultures, fatherhood is heavily associated with manhood and this can add to the sense of stigma that many men feel when dealing with infertility. Talk openly with your partner about his emotions. It is crucial to be supportive and honest in these situations. Men may benefit from seeking support and engaging in physical activities or hobbies that provide a sense of accomplishment or relaxation.

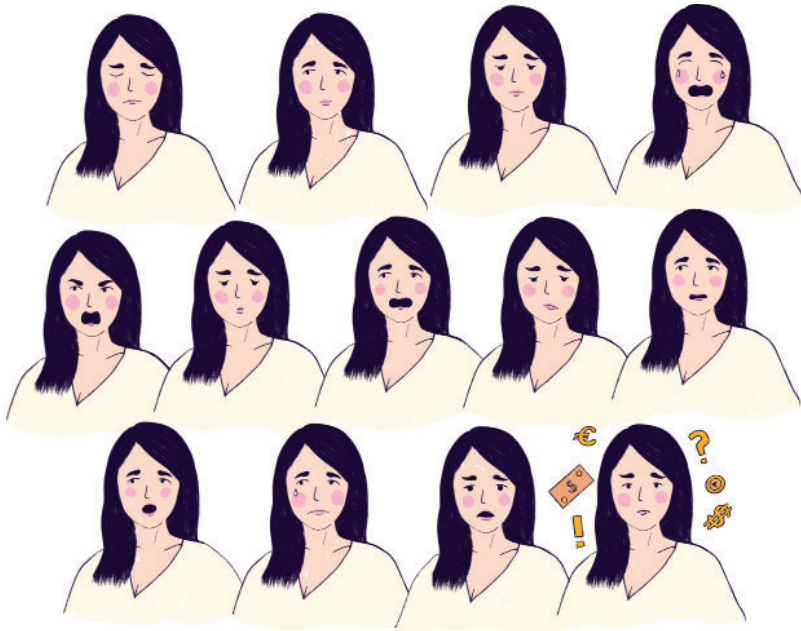
## How to deal with infertility?

### 1. Recognize Your Feelings

Experiencing infertility, pregnancy loss or stillbirth can be emotionally challenging. These emotions may come from external influences or your expectations. It is always good to recognise these feelings and seek out support when necessary. The most com-

mon feelings you may need to cope with are:

- Failure or inadequacy
- Guilt
- Shame
- Loss
- Jealousy or anger
- Loss of self-esteem
- Being judged
- Fear of rejection
- Shock and disbelief
- Sadness and depression
- Anxiety and fear
- Financial stress



When you identify an emotion, take a moment to think about what is causing it and who it is directed at. Ask yourself questions such as: Why do I feel this way? Are these my feelings or those of someone else? Answering these questions can help you to understand the emotion and to reach out for support if needed.

## **2. Allow yourself to be emotional**

It is perfectly normal to be sad or to feel anger over another friend who's got pregnant accidentally. Feel free to cry and pass on your friends and family's children's birthdays, celebrations, and baby showers. Find a safe space to release your emotions.

## **3. Make a plan**

Infertility is not your or your partner's fault. It is often beyond your control and the negative emotions

you experience can be exhausting. Talk to your partner openly and honestly about all your concerns, write down all your options, and focus on a plan.

## **4. Take care of yourself**

Physical and mental health is very important for going through infertility treatments. Focus on your well-being, stay active, and find hobbies or any activity that you find fulfilling - it's best if it has a different scope than anything that has to do with pregnancy planning.

## **5. Reconnect with your partner**

Make sure to plan some time for just you and your partner that isn't only about trying to have a baby.

## 6. Seek help

You're not alone. Fertility support groups can be very helpful for people struggling with infertility. These groups provide a safe space where you can talk about your feelings and experiences to others who have gone through similar situations. By listening to other people's stories, you may feel less stressed and overwhelmed. You can also build relationships with others in the group and create a supportive network. Sharing knowledge and resources can make you feel like you have a team helping you with your fertility struggles. These groups can ease the pain and frustration of infertility and provide a safe space for everyone to talk about their often very intimate matters.

Mental health professionals or psychologists who

have experience in working with people facing fertility issues can be very helpful. They can advise how to cope with the emotional and physical challenges of infertility and fertility treatments. They can also help you deal with stress, anxiety, and depression. These professionals can tutor you in problem-solving strategies in a supportive environment and help you communicate better with others. Seeing a mental health professional may also be advantageous if you and your partner are struggling with deciding on treatments, exploring other family-building options, or having difficulty communicating with each other.



### *Things to remember*

- » Infertility can lead to a range of complex emotions.
- » It is perfectly understandable if your negative feelings are triggered by seeing pregnant women near you, pictures of babies, or listening to conversations about other people's children.
- » Men also feel a sense of shame, inadequacy, and loss when they face problems with their fertility.
- » Infertility can put a strain on the emotional connection between you and your partner.
- » The experience of pregnancy loss can have a significant impact on your mental and emotional well-being.
- » These emotions are normal and lots of people facing problems with fertility share the same feelings.
- » There are many ways to help you deal with the emotions of infertility.







CHAPTER 12

# **Donation in fertility treatments**

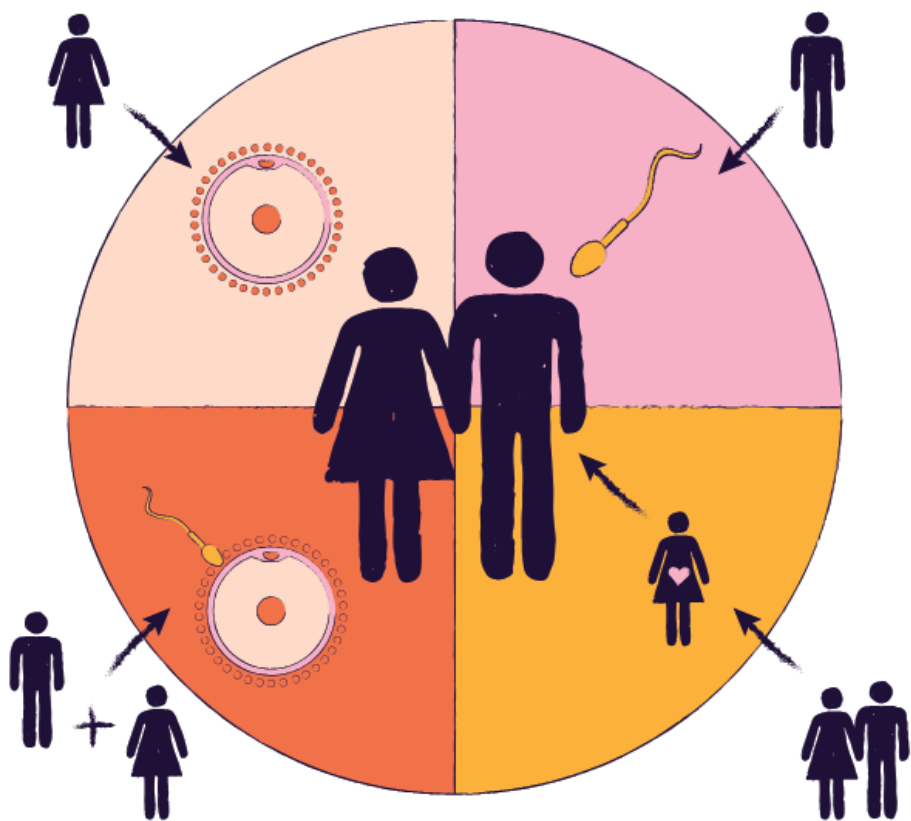
## What is donation?

In medically assisted reproduction treatments, individuals can donate their reproductive cells (egg cells or sperm), called **gametes**, or their **embryos** (egg cells fertilized by sperm) to another person or couple so they could have a child. Donation for fertility treatments is used to build or expand families.

**Gamete donation** is when a woman donates her eggs or a man donates his sperm. **Embryo donation** is when a couple donates their embryo.

**Donors** are the persons who are giving their gametes or embryos. **Recipients** are the persons who are receiving gametes or embryos.

The child that is conceived with the help of donated gametes is often called a donor-conceived child. A person or couple who are recipients will be the child's parents from the beginning and the donor cannot claim parenthood or be obliged to take parental responsibilities.



## When is donation recommended?

Your doctor could advise you to use donation if you have a condition or diagnosis that prevents you from using your own egg cells or sperm, for example, if a woman has a problem with producing her own eggs, or if a man has severe sperm irregularities. In some cases, there is very little chance that your own eggs or sperm will enable pregnancy. This often happens when the woman is over the age of 40, in which case the use of donor eggs from a younger woman is recommended. Sometimes there is a chance that the future child could inherit a genetic disease from one or both of its parents. In all these cases we talk about **“medical”** donation because there is a medical reason for using donor gametes.

Donations of reproductive cells can also be used as a way to build or expand your family if you are a single woman or a same-sex couple. This is called **“non-medical”** or **“social”** donation.

## Anonymous and non-anonymous donation

Anonymous donation means that the donor’s identity or personal details are not supposed to be disclosed to the person, or couple receiving the donated gametes or embryos. The donor’s identity or personal details are also not to be disclosed to the donor-conceived child. In anonymous donation, the donor selection is made by the medical team. The donor is often chosen based on the same blood group as the recipient. The donor is also often chosen due to a resemblance to the recipient in terms of physical characteristics (hair and eye colour, height, weight, etc.).

Non-anonymous donation means that some details about the donor will be known to the person or couple receiving the donated gametes, or embryos, or to the donor-conceived child. There are various forms of non-anonymous donation:

**Open donors** - when more identifying details are shared and meetings with recipients or donor-conceived children are possible.

**Known donors** - an acquaintance, a friend, or a relative; someone who knows and understands the recipient very well.

**Donors whose identity will be revealed to children** - when parents don't know the identity of the donor at the treatment time, but it is revealed to children when they are 16 or 18 years old (depending on the country).

There are many vital differences between non-anonymous and anonymous donor treatments that bear significant consequences. This is why it is very important to receive complete and thorough information on all aspects of donation. You need to understand different treatment options and the advantages and disadvantages associated with them, to be able to make an informed decision.

Coprehensive information about the treatment possibilities should be offered to everyone considering donation. Each EU country has its own laws and regulations on gamete and embryo donations. Some countries enable donation in fertility treatment without exclusions while others enable it only partially. In some countries donation is anonymous, while in others donation is non-anonymous. A few EU countries do not allow donation in fertility treatments at all.



## Your donation decision in fertility treatment

Building or expanding a family through donation is a complex and emotional process. Each person will experience it in their own way and there are no absolute right or wrong answers.

The decisions should always take into account everyone involved in the donation process: a potential parent or parents, donors, and donor-conceived children. This is why it is important to discuss all aspects of donation carefully with the medical team and psychological counsellors. The final decision should always be based on all the information available.

For some people, gamete and embryo donation is a sensitive subject because it deals with the question of genetic family ties. That question is traditionally regarded as important for building the family as the central unit of society. Sometimes it is challenging to learn or understand, that different ways of growing a family are possible and ethical.

Although donation in fertility treatment has existed in the EU for more than 30 years, using genetic material originating from donors from other countries is still taboo in some societies. Because of this, many people choose not to use the donation to conceive, or decide on a donation quite late. Some people prefer keeping donations in their fertility treatment a secret.



## **Donor-conceived child and child rights**

“Should I tell my child?” “Should I tell my family?” “Should we be open about donation?” These are questions that many people still ask themselves. In countries where donation has been present for many years, speaking to donor-conceived children about their origin is broadly accepted as the best option due to the child’s rights and well-being.

Openness about donor conception is recognised nowadays as very important to donor-conceived children. At first, the decision to be open about the child’s biological origin might be a challenge for many parents. However, in the long run, honesty as a solid foundation of sincere family relations is beneficial.

How to start the conversation with donor-conceived children? In some countries books for children or booklets with advice for parents are available. It is also wise to seek professional help whenever in doubt.

Due to children’s rights, there is a growing tendency in the EU towards non-anonymous donation, which has been defined by law in several countries.



*Things to remember:*

- » Donors can donate their gametes (eggs or sperm) or their embryos to another person or couple (recipients) so they can have a child
- » There are various reasons to use donor eggs or sperm - medical or non-medical
- » Donations in fertility treatment can be anonymous or non-anonymous. Different countries have different regulations on donor anonymity
- » Building or expanding a family through donation is a complex and emotional process, there are no absolute right or wrong answers
- » Openness about donor conception is recognized nowadays as very important for donor-conceived children







CHAPTER 13

# Preventing infertility

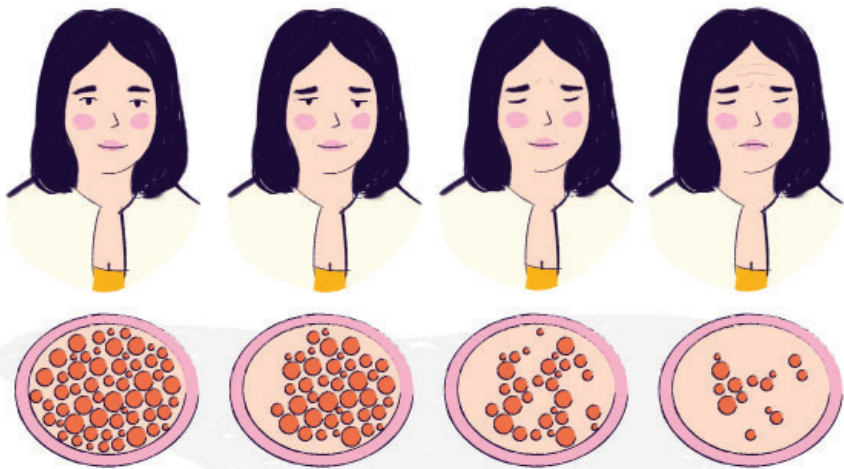
## Age matters

Age is one of the most important factors affecting our fertility and it should always be taken into account when planning for a baby. Postponing the decision to have a child may result in longer efforts or even infertility.

Women are most fertile between the ages of 20 and 25. During this time, the chances of getting pregnant in one cycle are around 25%. In the following years, fertility begins to decline. Around the age of 30, the chance of

conception in one cycle drops below 20%, after the age of 35 to about 15%, and after the age of 40 to less than 5%.

As women age, fertility declines due to a decrease in the quantity and quality of eggs and the risks of complications during pregnancy and genetic disorders increase. Men's age also affects fertility, with a decrease in sperm motility and volume after the age of 35 and 45 respectively. Furthermore, the risk of diseases in the future baby increases as the man ages.



## Give up alcohol, cigarettes and recreational drugs

Smoking harms fertility in both men and women. Women who smoke may experience irregular periods and ovulation problems, while smoking by men can lead to a lower sperm count and quality. Alcohol consumption, as with smoking, can disrupt menstrual cycles and lower sperm count and quality. Drug use, whether hard or soft, can significantly reduce fertility by decreasing semen quality, and volume, and even altering sperm DNA.



## The right diet for health and fertility

What we eat has a big impact on our fertility. Our diet affects metabolism, which regulates the work of the hormones responsible for the ability to conceive. To avoid fertility problems, you should refrain from consuming the following products.

### **Highly processed food**

- these are products that have been prepared without nutrition care and sometimes with additional substances that have a bad effect on our health and fertility. Highly processed food is also very high in calories and can cause weight gain. This includes cookies, crisps, fast food and ready-to-eat meals. Not all ready meals are unhealthy. It is worth reading the ingredients of the produce we buy and choose wisely.

**Sweet drinks** - we often satisfy our thirst or craving for something sweet with carbonated, sweetened drinks. Unfortunately, they don't benefit our health and fertility. When you feel thirsty it is a sign that your body needs water. When you feel like something sweet, reach for fruit, homemade cake or a piece of good-quality chocolate. Sweet drinks contain a lot of sugar, which disrupts the metabolism and causes weight gain. Sweet energy drinks are particularly dangerous - they provide an unnecessary dose of sugar and caffeine and disturb water and electrolyte balance.

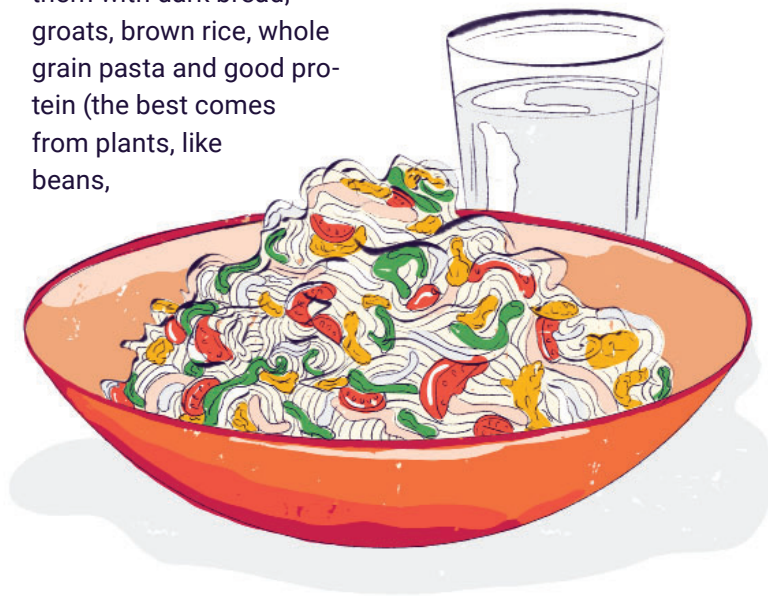
**Unhealthy fats** - trans fats are very unhealthy substances that can significantly reduce fertility. They are found in highly processed food, ready-made cakes and biscuits, crisps

and fast food (hamburgers, French fries, etc.). They are especially dangerous for people with insulin resistance, suffering from cardiovascular diseases and people with obesity.

**So, what to eat?** If you want to take care of fertility follow a healthy diet, rich in fresh vegetables, whole-grain carbohydrates, good proteins and fats. Vegetables should make up to half of every meal. Supplement them with dark bread, groats, brown rice, whole grain pasta and good protein (the best comes from plants, like beans,

lentils or chickpeas). Remember to eat fish at least twice a week (preferably baked or steamed). If you like meat, it is best to choose chicken or turkey and to limit the consumption of red meat (lamb, beef and pork).

Remember the importance of drinking water. You should drink about 2 litres of water a day depending on your weight and lifestyle.



## Try to maintain a healthy body weight

Both being overweight and underweight can cause fertility problems.

You can check if your weight is in the healthy range by calculating your body mass index (BMI). To calculate your BMI, you need to know your weight and height.

Prepare the data and put them into the formula:

$$\text{body weight} / (\text{height in meters})^2$$

For example: if you weigh 68 kg and your height is 165 cm, the equation looks like this:

$$\mathbf{68\text{kg} / 1.65\text{m} \times 1.65\text{m} = 25\text{kg/m}^2.}$$

That means your BMI is 25.

The best BMI when trying to conceive is between 20 and 25.





Being underweight can cause irregular cycles or lack of ovulation, making it difficult to conceive. On the other hand, excessive body weight can harm hormone production and cause conditions like insulin resistance, which can lead to infertility. In men, obesity can reduce sperm quality and quantity and cause erection problems. It is important to maintain a healthy weight through a balanced diet and regular exercise and seek help from a doctor or dietitian, if necessary.

## Exercise just right

Regular physical activity is good for maintaining a healthy weight and overall health, which benefits fertility. However, excessive exercise and competitive sports can have negative effects on fertility, especially in women. Intense and frequent exercise can disrupt the hormonal balance and it can interfere with sperm production in men. Anabolics can be particularly dangerous and reduce semen quality, whilst also causing problems with sexual functions.

## Only safe sex!

Recurrent inflammation of the vagina and penis can cause difficulties with getting pregnant, or even result in permanent infertility. Therefore, always remember about safety during sex. The use of a condom reduces the risk of contracting sexually transmitted diseases and reduces the risk of intimate infections. Condoms are especially important if you don't have a regular partner, or if your partner may have sex with other people.

Condoms and other contraceptives should not be used, of course, if you are trying to conceive.

## Health and safety at work

Some jobs can harm fertility. To avoid it, be careful of:

**Dangerous substances** - use protective clothing and equipment if you work with toxic materials.

**Sedentary work** - if you sit for a long time, take frequent breaks to do squats and walk around.

**Laptop on your lap** - this can overheat your testicles, affecting sperm quality. Use a desk instead and wear loose cotton pants.

**Excessive stress** - it can affect your hormonal balance and fertility. Rest well, get enough sleep and control alcohol intake. Relieve stress through exercise, yoga or meeting friends.



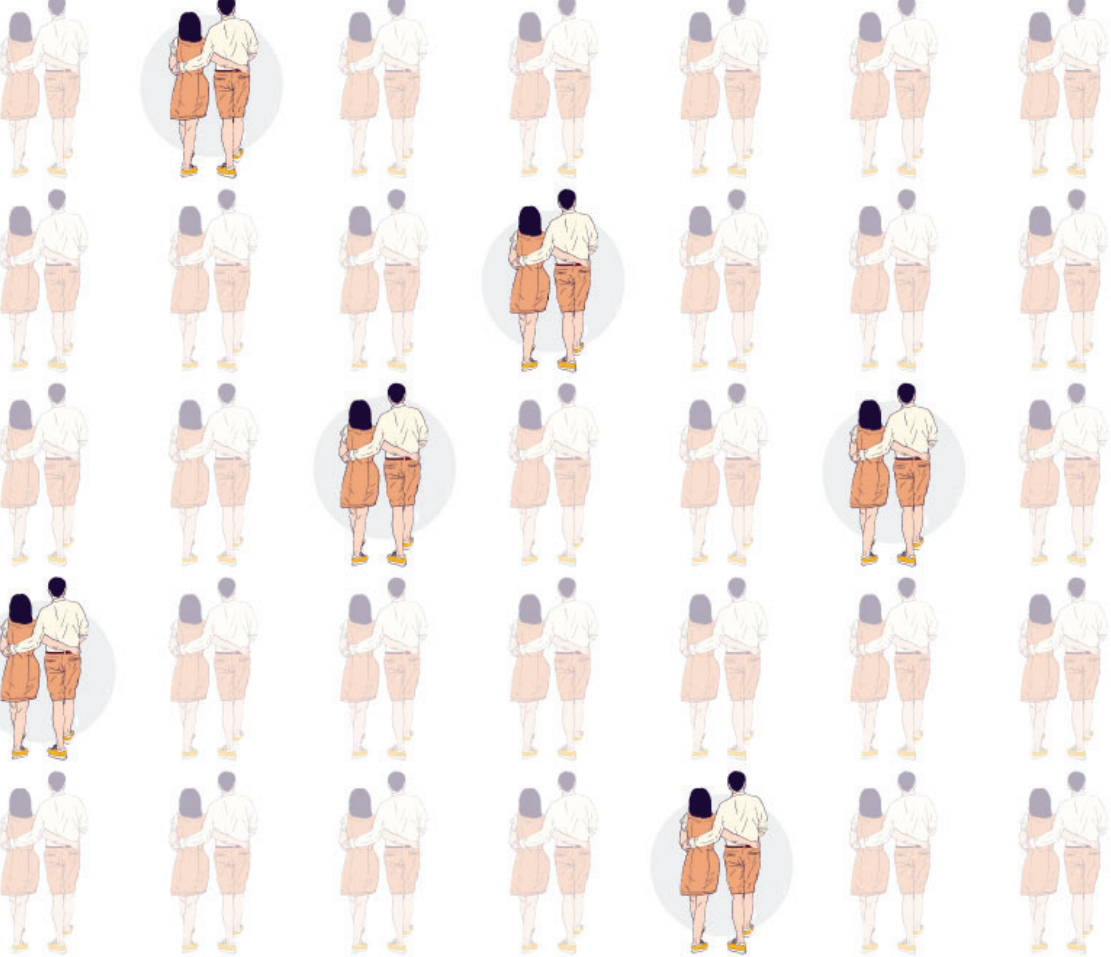
***Things to remember:***

- » **Age matters. The older we get, the harder it is to get pregnant**
- » **A healthy diet with lots of vegetables is beneficial when trying to conceive**
- » **Too high and too low weight make it difficult to get pregnant**
- » **Moderate physical activity improves health and fertility**
- » **Give up smoking and limit alcohol if you want to get pregnant**
- » **Sexually transmitted infections harm fertility. If you don't have a permanent partner, be sure to use condoms**
- » **Find a way to relieve stress responsibly**



CHAPTER 14

# **Support in infertility**



## Is this infertility?

When we are suspecting fertility issues, it can trigger difficult emotions, with many questions causing stress, fear, and sadness. People unsuccessfully trying to conceive may also feel angry, asking why this is happening and wondering what they have done wrong. You've done nothing wrong and you're not alone. Infertility affects 1 in 6 couples, and it's not anyone's fault.

## **Is there something wrong with us?**

Struggling to conceive may make us feel unworthy and wonder if something is wrong with us. Infertility is a disease that doesn't define our femininity or masculinity. We're not worse than others and shouldn't judge ourselves harshly. You would not judge people suffering from other diseases, so be kind to yourself too.

## **First visit to a fertility clinic**

Many patients feel stressed about their first visit to the fertility clinic. Even making the first phone call to the clinic can make you very nervous. And anxiety can build up as your first visit approaches. All this is completely understandable and common. How then can you make your first visit less stressful? Check the clinic's website or call for information. Write down important

details and questions to ask the doctor. Good preparation and knowledge can help you feel less stressed.

Waiting for test results and treatment outcomes can make us feel powerless. Focus on what you can control, such as making good changes to your diet, or exercising to support fertility.

## **Relationship problems**

It's helpful to maintain intimacy and not see sex as a means to getting pregnant when trying to conceive. Relationship issues can also arise from feeling that your partner isn't putting in equal effort, or has conflicting opinions on infertility treatments. Try to understand each other's perspectives and find compromises to avoid strain. It's essential to consider each other's needs and feelings during this time.

## When and where to look for help?

Emotions related to infertility can affect many aspects of our lives. They can affect both personal and work relationships. Bad test results, negative pregnancy tests, pregnancy loss, financial problems resulting from treatment - all this causes great stress which we are not always able to cope with. Seeking support is essential and a sign of strength, so don't hesitate to ask for help.

About one in five people dealing with infertility suffers from depression. If you suspect that you or your partner belong to this group consult a psychologist as soon as possible. Symptoms of depression can include sadness, tearfulness, trouble sleeping, loss of interest, fatigue, difficulty concentrating, and low self-esteem.

Psychological support can be helpful when dealing with infertility. You can choose to go to therapy alone or as a couple. Individual consultation or psychotherapy can help you sort out your thoughts and make important decisions. Couple therapy can help you find solutions to many problems and to understand each other's needs. If your partner is not ready to seek help then don't rush them. Individual sessions can also be effective and bring positive effects.

Support groups and workshops can also be helpful for those who prefer group meetings and want to learn how to deal with difficult emotions, or prepare for treatment.



A support group is also a great opportunity to meet people who have similar experiences. You can also talk about your own journey, but you don't have to.

It's important to remember that seeking help is a sign of maturity and courage.

### **Patients' organisations**

In many countries, there are non-governmental organisations that focus on supporting and informing infertility patients, standing up for their rights, and raising awareness. These associations provide information on diagnosis, treatment, and sometimes financial aid to couples with fertility problems. It is good to find a national or local organisation in your country and see how they could help you.

### **Few words to your family and friends**

If someone you know - your family member, relative, friend or colleague is struggling with infertility, it's essential to offer your support and understanding. What can you do for the loved ones who are trying to get pregnant without success? Most important of all, be close. Make it clear that you will always be there when they need you. Listen to them when they want to



talk, but don't judge or offer unsolicited advice. Don't ask for details about their situation, or compare their status to others. Every case of infertility is different.

Ask instead how you can help and be there for them in whatever way they need, whether that's through conversation or helping with everyday tasks.

### **What not to do and not to say?**

Avoid giving unsolicited advice such as "Just relax, it will happen!" or "If it doesn't work out you can always adopt." While the intentions may be good, these statements can be inappropriate and hurtful. They may suggest that infertility is the fault of the person experiencing it, which is untrue and can be very painful. Adoption is also a complex process that requires careful consideration and

decision-making. Suggesting that it is an easy solution, ignores the emotions and challenges associated with both infertility and adoption.

How to deal with a miscarriage? It's best to be there and be sensitive. Allow the person who has experienced a miscarriage to talk about their feelings and listen to them without judgment. A miscarriage is a difficult experience. It usually takes time to mourn the loss. Don't offer ready-made solutions. Grieving people don't want to hear that they can have another pregnancy and baby soon. Everyone experiences miscarriage differently, so it's important to be there for your loved one and support them in their needs and feelings.



### *Things to remember*

- » Trying to get pregnant with no success is an emotionally difficult time. Don't be afraid to ask for support and help
- » Infertility is a disease - don't blame yourself for not being able to conceive. It's not your fault
- » People who struggle with infertility are no worse than others. Infertility does not take away your femininity or masculinity
- » The emotions you experience are completely normal and common
- » Prepare for your doctor's appointment by researching and writing down questions
- » Take control of your life by improving your diet and exercising
- » Respect your partner's feelings and find compromises if you disagree about available options or further actions
- » Seek help if you're struggling with your emotions or notice symptoms of depression
- » Support from loved ones is important - listen and try to understand instead of judging or giving advice

## A final note

As we reach the end of our journey, think of these pages as a friendly guide through the challenges of infertility. They're here to offer understanding, like a helping hand when you need it. Life's a journey with twists and turns; we're happy you've shared a part with us.

As you move forward, know that you're not alone. Be kind to yourself, and may your path be filled with hope. And always remember - all kinds of paths are fine and meaningful.

So, as you continue, embrace the idea that your journey is a mosaic of experiences, and in your individuality lies strength. Your path is uniquely yours, worth embracing in all its forms.

And remember, we're here cheering you on, and supporting you every step of the way.



The word **infertility** sounds scary.

For many people, infertility is something distant and unknown, something that happens "to other people, not to us". In fact, around 25 million people in the European Union alone are facing infertility. This means that every sixth couple has trouble conceiving a child.

We understand that talking about infertility can sometimes feel overwhelming, and you're not alone. This book is here for you, as a friendly guide. It speaks about a topic that touches many lives, offering understanding and information in simple words that everyone can connect with.

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