

## Fertility tests and treatments

This guide contains information about the fertility tests and treatments at the Turku university hospital (Tyks). Our specialized fertility unit and its Fertility Laboratory are located at the Majakka hospital, Gynaecological outpatient clinic (Naistentautien vastaanotot K).

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### 1 Contact information

We are happy to answer questions regarding fertility treatments. To ensure that communication is as smooth as possible, we ask you to contact us during the appointed hours by phone.

Patients who are already receiving treatment can **contact us through the secure Healthvillage My Path service channel**. You will be shown how the application is used during your appointment.

**Fertility nurse** (for patients undergoing treatment), **telephone 02 313 2343**

- Tuesday between 1.00–1.30 pm
- Thursday between 1.00–1.30 pm

**Fertility laboratory, telephone 02 313 2357** (booking an appointment for semen sample)

- Monday–Friday at 8.00 am–10.00 am

## **Gynaegological outpatient clinic telephone 02 313 1322**

- secretary, appointment bookings, Monday–Friday at 1.00–3.00 pm
- nurse, call back requests, Monday–Friday at 8.00 am–3.00 pm
- in urgent matters in the evenings and weekends

## **2 Treatment access criteria**

**Starting fertility testing requires a referral** from a health center or from a private practice, and usually an active attempt to conceive that has lasted for a year. If a diagnosis that substantially decreases fertility has been made (i.e. missing or very long menstrual cycle, poor sperm quality, difficult endometriosis), the testing can start earlier. Testing can begin after trying to conceive for 6 months in case of women who have turned 38. In the case of women over 40 the treatment is only provided if the ovarian reserves are evaluated to be sufficient and the prognosis is considered favorable (AHM test; the number of so-called antral follicles in the ovaries).

**Treatment using donor sperm** is possible for female same-sex couples, single women and couples whose male partner's ejaculate lacks semen for reason other than a previous sterilization. This treatment requires the woman to be under 40 years of age, and treatment cannot be guaranteed, because the amount of sperm donors is limited. A nationwide agreement for a body mass index range for potential patients has also been established, and it is 18–35 m<sup>2</sup>/kg. Undergoing the legally required donor cell counselling is a prerequisite for donor sperm treatment. The counselling is carried out by a psychologist.

At this time, we do not provide treatment with donor eggs or embryos: these treatments are centralized to the TAYS and HUS Women's Hospital, and a referral can be made there.

We can only provide a limited amount of fertility treatment care, and because of this families with no children are given priority. Fertility treatments are usually not provided for couples if the couple already have two children together. Fertility treatments are also not provided if the reason for infertility is a prior sterilization of either party.

If there is cause to suspect that the treatment or pregnancy can cause significant danger to the mother or the fetus, we might not be able to start the treatments. In this case, we will consult an obstetrician or the doctor responsible for your care. If there is cause to doubt that the parents are able to provide the unborn child a home environment which promotes balanced development, we can ask for a social worker and/or psychiatrist to conduct a parenting assessment.

**We hope that changes have already been made to lifestyle choices that decrease fertility and worsen the treatment prognosis before the patient(s) are referred to Tyks for treatment**, and that ideally this is mentioned in the referral.

**Diet:** Your diet should be varied and healthy, and contain an adequate amount of the B-vitamin folate, because consuming an adequate amount of folate decreases the risk of fetal birth defects. We recommend that you **start taking a folic acid supplement** (0.4 milligrams, meaning 400 micrograms) when you start planning for pregnancy.

**Weight management:** Significantly abnormal weight can in and of itself be the cause of infertility. In addition, being over- or underweight make it more difficult to carry out the treatments safely and successfully. You can receive help for managing your weight from your local health clinic.

**Smoking:** Before the treatments are started we require **that both parents stop smoking** (see [Tupakointi ja lisääntyminen](#), in Finnish). In women, smoking impairs the normal functions of the ovaries and the uterus, and in men it impairs fertility even if the sperm count is normal. You can get help to stop smoking from the Tyks smoking cessation nurse.

**Alcohol and drugs:** Alcohol and drug abuse increase the rate of pregnancy problems and endanger the health of the newborn child. Decrease excessive alcohol consumption.

### **3 Legal considerations**

#### **Right to receive information**

You can access the notes made on your health record through My Kanta Pages within a couple of days of your visit. The fertility treatment records however are not accessible through My Kanta Pages.

When the treatments start, we will provide you with written patient instructions and a flow chart of the treatment process for the chosen treatment method. Most of the time, the treatment start date and follow-ups are arranged by phone or through the My path -channel. We wish that you remain available and let us know if your phone number changes.

If you need copies of your laboratory results or your medical notes during your treatment, you can ask for copies from the fertility nurse. If you need copies later, you can request to receive copies by phoning the Patient Data Archives service number on weekdays between 9 to 11 am and 12 to 3 pm, telephone 02 313 2989.

#### **Data protection**

To ensure data protection, we will send all the copies of laboratory result and sperm analysis result to the person who has been tested when a request for copies is made by phone. To make things easier, it is possible to draft an agreement for disclosure of information during an in-person appointment.

## 4 Treatment contracts

### Consent to Treatment

In fertility treatments where a gamete (sperm) or an embryo (a fertilized egg) is transferred into a woman for the purposes of achieving pregnancy, or gametes or embryos will be stored (frozen), a written consent form is required (Act on Assisted Fertility Treatments 1237/2006). This means that a consent form is required for the insemination and in vitro fertilization procedures as well as for the frozen embryo transfer. **Treatments cannot be carried out without an up-to-date Consent to Treatment form.**

Written Consent to Treatment form is made in 2 to 3 copies during an outpatient clinic appointment, where the persons who are receiving treatment as a couple are attending the appointment together. A member of the health care team and the single woman or both of the couple sign the consent form. The person or persons receiving treatment receive a copy, and the treatment unit's copy is archived.

The Consent to Treatment form includes:

- The forms of treatment that are covered. The consent form can also be drafted to cover all treatment forms.
- The period of validity. We recommend that the period of validity is 12 months for insemination treatments, and 2 years for in vitro fertilization and frozen embryo transfer treatments.

A new Consent to Treatment form is drafted if the period of validity expires, or if the treatments are continued or changed.

### Agreement for Embryo Storage

The agreement is **made for 4 years** during the course of the **in vitro fertilization treatment**. The single woman or both of the couple and a member of the health care team sign the agreement. In the case of embryo transfer, the patients receiving treatment will receive their own copy of the agreement if embryos are frozen. The treatment unit's copy of the agreement is archived.

If no embryos are frozen, the signed agreement is destroyed.

### Cancelling consent before period of validity expires

If a person receiving treatment wants to cancel a signed consent to treatment, they must contact the fertility treatment unit's Fertility laboratory or the fertility nurse. Notifying the treatment unit about the end of the relationship or withdrawing consent will end the consent to treatment, and means that the frozen embryos will not be transferred. The embryos will be disposed at either party's written request or if they cannot be used for embryo transfer for some other reason.

## **5 Paternity**

The Consent for Treatment guarantees the male partner the possibility to receive a written document confirming that fertility treatments have taken place and that has resulted in a pregnancy. If the parents of the child are married, the husband is automatically recognized as the father. In the case of a common-law marriage, the father can acknowledge paternity at the local health center (neuvola) either during the pregnancy or after the child is born (Paternity Act Section 16).

## **6 Maternity**

The woman who has given birth to the child is automatically the mother of the child by law. The maternity can also be confirmed for the common-law spouse or wife of the birth mother when they have undergone fertility treatments as a couple. The acknowledgement of maternity can be done at the local health center (neuvola) during the pregnancy, or it can be done by the child welfare officer after the child is born.

## **7 Help and support**

Involuntary childlessness can be a very painful problem. It is an “invisible illness” that healthy and young people suffer from. Many childless couples have difficulties talking about their problem with their families and friends and sometimes even with each other. We offer the option to have a supportive talk with a psychologist who is specialized in the problems of childlessness. You can tell about your wish to a talk with the psychologist to our unit’s doctor or fertility nurse.

It is possible to make an appointment to the department’s sexual therapist or sexual counsellor in matters relating to your sexual relationship. Discussions with them are confidential.

The organization for involuntary childlessness Simpukka ry. offers help and advice, for more information visit [www.simpukka.info](http://www.simpukka.info) (in Finnish).

## **8 Kela reimbursements and outpatient client fees**

When it comes to fertility treatments, the most significant source of expenses are the medications, which in turn are affected by the personalized dosage. Kela (the Social Insurance Institution of Finland) will reimburse part of the expenses incurred when purchasing prescription medications after the patient has met their initial deductible. The annual maximum limit on out-of-pocket costs is decided annually ([www.kela.fi/medicine-expenses](http://www.kela.fi/medicine-expenses)). Your medications can be reimbursed directly at the pharmacy when the pharmacy checks your eligibility through the Kela’s electronic direct reimbursement service. The eligibility check is carried out every time you visit the pharmacy as a part of the medication delivery process.

All the persons who are eligible for fertility treatments as per law are not eligible for Kela’s reimbursements. Factors that affect the reimbursements include the amount of treatment

received, the reason for treatment and the age of the person receiving treatment. You can check if the treatment you receive is eligible for reimbursements from Kela.

You will be charged a clinic fee for each outpatient visit according to the current price list. The partner's first visit is subject to a clinic fee, covering his examinations and tests. Appointments where an ovum-pick-up procedure or a testicular biopsy takes place are also subject to a clinic fee.

## **9 First assessment and preliminary tests**

The initial consultation includes basic tests for the male and female partners where the goal is to identify the causes for infertility. The referring unit has usually already conducted some of the basic tests. If more tests or retesting is required, we will schedule them approximately 1 to 2 months before the first visit so that the results are ready and available during the initial appointment. The doctor can order some of the tests after your first appointment.

**We wish that couples that are seeking treatment together arrive to the initial consultation together**, because the wish to become pregnant and have children affects both parties. We will go over both partners' test results, if applicable, and plan for possible further tests based on those results. The form of treatment that is chosen is based on the test results that have been performed. The form of treatment cannot be determined before the planned test have been taken and the results analyzed.

### **Preliminary tests for female patients:**

- The Pap test, also known as the smear test, if it has not been performed for 3 to 5 years.
- A pelvic exam and breast examination.
- Laboratory tests:
  - a urine test for chlamydia and gonorrhoea
  - hormone blood samples, i.e. FSH, TSH, PRL, between the 3rd and the 5th day of the menstrual cycle
  - patients who are 40 or older: AMH
- A vaginal ultrasound to assess the structure of the ovaries and the uterus.
- Possible further tests:
  - transvaginal salpingosonography (TSSG) to assess fallopian tube patency
  - an ultrasound of the uterus (hysterosonography)
  - a hysteroscopy as an outpatient procedure
  - a laparoscopy and a fallopian tube patency test as a day surgery procedure

### **Preliminary tests for male patients:**

- a semen analysis
- genital examination and testicular ultrasound if required
- Possible further tests:
  - control semen analysis 3 months after the first sample

- hormone and chromosome analysis and the Y chromosome microdeletion testing from a blood sample

### **Recurring infectious disease testing**

The handling of gametes (such as sperm and egg cells) in the Fertility laboratory requires that both the male and female partner whose gametes are handled at the laboratory have been tested for blood-borne diseases, meaning HIV, hepatitis B and C and the hepatitis B core antigen, and, in some cases, the human T-lymphotropic virus (HTLV). (Act on Assisted Fertility Treatments 1237/2006).

We will order these test during an outpatient visit. They must be taken within 3 months before the first treatment. The tests are valid for two years.

#### **The tests will be retaken earlier, if:**

- There has been exposure thought contact with blood or sexual transmission.
- Either male or female partner has gotten a tattoo or a piercing.
- Either partner has travelled to the following destinations: Latin America, Malaysia, the Caribbean, South Japan, Middle or South Africa.
- A trip lasting for a period of one month, depending on the destination country.

It is the duty of the persons receiving care to notify the fertility clinic in abovementioned situations. We recommend that you move your plans to get a tattoo and/or a piercing to the time after the fertility treatments. This way we can prevent unnecessary delays in treatment and possible extra costs to the couple receiving treatment.

## **10 Fertility treatments**

Involuntary childlessness and infertility is caused by female causes 25% of the time, 25% is due to male causes, another 25% are due to a combination of female and male causes, and in 25% of cases the cause remains unknown. Fertility treatments can also be carried out in a situation where infertility is not the cause for treatment (same sex partners and single women).

The treatment method is chosen individually for each patient. We will provide detailed patient instructions for the chosen treatment plan during your treatment planning appointment.

Always sign up for **the treatments by either using the My Path -channel or by phone during the weekdays** on the first day of bleeding of the menstrual cycle. **We will respond to My Path -channel messages on weekdays.**

### **Ovarian stimulation, a.k.a. the ovulation induction therapy (OI)**

The ovarian stimulation therapy means growing and maturing the egg cell. We use hormonal medication, either in the form of pills or injections (FSH injection), to stimulate the ovaries during the therapy. The goal is to grow and mature 1 to 3 ovarian follicles and make sure ovulation

takes place. The time of ovulation is determined by either taking a urinary ovulation test (the LH test) or by taking an ovulation injection, a.k.a. an hCG injection.

### **Insemination treatment (IUI, AIH, AID)**

Insemination, also known as artificial insemination treatment, means that the individual sperm with good motility that have been separated from the male partner's or donor's semen at the Fertility laboratory are injected into the uterus with a thin catheter. It is timed to take place on the day of ovulation as closely as possible. The insemination treatment is often combined with ovarian stimulation therapy.

### **In vitro fertilization treatment (IVF, ICSI)**

IVF treatment is always planned on an individual basis. FSH injections are most commonly used during the ovarian stimulation phase. During the course of the hormone treatment, many ovarian follicles are grown at the same time. The follicular fluid is collected during an ovum pick-up (OPU) procedure and mature follicles are extracted from the fluid at the Fertility Laboratory for fertilization.

In conventional IVF, the fertilization takes place in a petri dish placed into an incubator. The sperm fertilizes the egg cell and cell division starts, forming an embryo. The early development of the embryos is observed at the laboratory for about 3 to 5 days in most cases.

In microinjection (ICSI), the collected follicles are fertilized using a thin needle to inject the sperm into the follicle with the help of a microscope. Microinjection is used when the fertility of the used semen is significantly low, the fertilization of the follicles has been poor during earlier IVF treatments, or when the semen has been extracted through testicular biopsy. The follicles that have been fertilized using the ICSI technique and the resulting embryos are monitored according to the same process as the embryos and follicles that have been fertilized using conventional IVF.

### **Embryo transfer (ET, FET)**

Embryo transfer refers to the process where a normally developed embryo is transferred into the uterus. An embryo transfer that takes place 3 to 5 days after the ovum pick-up procedure is called a fresh embryo transfer (ET). An embryo transfer that takes place later and where the embryo has been frozen previously is called a frozen embryo transfer (FET), and it is carried out during a natural or hormonally induced cycle or after an ovulation induction. After the embryo has been transferred, vaginal suppositories that contain progesterone are used to support the endometrium.



## 10 Hormonal medications

### Medications for ovarian stimulation, tablets

Femar®, Letrozol®, Tamofen® tablets

The medications are used to mature the follicles (ovulation induction) and sometimes they are also used in IVF treatments. Ovulation induction is sometimes combined with IVF treatment.

These medications affect the pituitary gland similarly to endocrine disruptors, causing the pituitary gland and the ovaries to accelerate their endocrine functions. This leads to the growth and maturation of an ovarian follicle. These medications are usually used in the beginning of the cycle for 5 days. The dosage is determined individually based on the patient's response to the medication.

These medications are used to treat breast cancer, and they are also used in ovarian stimulation treatment.

### Injections for stimulating ovarian follicle growth (FSH injections)

Gonal-F®, Menopur®, Fostimon®, Pergoveris®, Bemfola®, Elonva®

FSH injections are used in IVF and ovulation induction therapies. The FSH injection can be combined with tablet medication. The FSH injections cause the ovarian follicles to grow and mature in the ovaries. The medicine is injected into the stomach, into a layer of fat under the skin. The injection technique is easy to learn and we will provide you with instructions during your appointment.

- The **Gonal-F®, Menopur®, Fostimon®, Bemfola®, Pergoveris®** medications are injected daily and at the same time each day. The medication is used usually between 9 to 12 days during in vitro fertilization treatment, and, in the case of ovulation induction therapy, the length of use depends on how the patient responds to the medication.
- **Elonva®** is a long lasting FSH medication, and its effect lasts for 7 days. It is used in in vitro fertilization treatment.

### Side effects (tablets and FSH injections)

When taking orally administered medications, possible side effects include symptoms associated with lack of estrogen, such as sweating, hot flashes, and dryness of the mucous membranes. If you experience strong headache or visual disturbances during the treatment, the treatment must be stopped.

### Follicular maturation and rupture medication (hCG injection)

Pregnyl®, Ovitrelle®,(Gonapeptyl®)

The medication is used as a part of in vitro fertilization treatment and, if necessary, as a part of the ovarian stimulation and insemination treatment. The medication causes the final maturation

and rupture of the ovum (egg cell) from the follicle. The oocyte retrieval is performed approximately 36 hours after the hCG injection has been administered. The insemination is usually scheduled for the day after the injection, but it can also be performed at the same time as the hCG injection.

When following an agonistic treatment protocol, the GnRH agonist injection (Gonapeptyl®) can be used as an alternative to the hCG injection.

- **Pregnyl®:** The package includes powder and a solvent. Store the medicine in the fridge and use immediately after the solvent has been added.
- **Ovitrelle®:** Comes in the form of a prefilled pen. Store in the fridge.
- **Gonapeptyl®:** Comes in the form of a prefilled injection. Store in the fridge.

The medicine is administered at a predetermined time into the stomach, into a layer of fat under the skin. We will provide instructions on how to inject the medicine during your appointment at the clinic.

### **Long in vitro fertilization treatment protocol, GnRH analogue a.k.a. suppression medications**

Synarela®, Procren pds®

These medications are used during the long in vitro fertilization treatment protocol (agonist). The medication affects the ovaries through the pituitary gland and stalls (suppresses) the body's own endocrine function. It prevents spontaneous follicular rupture, a.k.a. ovulation. After the ovarian function has been suppressed, the process of growing the follicles is started by administering daily FSH injections. This makes it possible to mature several follicles simultaneously without the risk of follicular rupture.

- **Synarela® is a nasal spray** and used daily. Their use continues after the suppression period and they are used together with the FSH injection.
- **Procren pds®** are an injection and that effect lasts for 4 to 6 weeks.

Before the FSH injections are started, side effects can include hot flushes, headache and mood swings.

### **Short in vitro fertilization treatment protocol, GnRH antagonists a.k.a. prevention medications**

Cetrotide®, Fyremadel®

These medications are used during the short in vitro fertilization treatment protocol (antagonist) at the end of the stimulation treatment to suppress the ovarian function and prevent the premature release of the follicles. The medication is injected into the stomach, into a layer of fat under the skin in the same manner as the FSH injections. The injection can be administered at the same time as the FSH injection, but choose a different injection site.

## **Progesterone medications**

Lugesteron®, Crinone®, Lutinus®, Terolut®, Cyclogest®

This medication is commonly used after an ovulation induction and insemination and always during IVF treatment after an embryo transfer. The goal of the progesterone medication is to make the uterine lining favorable for implantation.

- **Lugesteron®** 100mg / 200mg vaginal capsules. The medication contains natural progesterone. Not suitable for patients with nut allergies!
- **Crinone®** vaginal gel
- **Lutinus®** 100mg vaginal suppositories
- **Terolut®** 10mg by mouth
- **Cyclogest®** vaginal suppositories

You will receive personalized instructions on how to take the medicine.

## **12 Additional information**

For more information, visit [www.Healthvillage.fi](http://www.Healthvillage.fi) Naistalo/lisääntymisterveys (only available in Finnish and Swedish).