



GUIDE TO CONTRACEPTION

INFORMATION ON BIRTH CONTROL METHODS

www.ehkaisy.com

CONTRACEPTION IS AN IMPORTANT PART OF A WOMAN'S LIFE

On average, women reach sexual maturity around the age of 12 to 13 and men about one year later. This means that the body is physically mature to reproduce and pregnancy is possible. Since sexual life includes much more than intercourse for reproduction purposes, it is important to use contraception if you want to avoid pregnancy.

Pregnancy can be prevented with hormonal contraception, various barrier methods, a copper IUD (intrauterine device) or sterilization. Contrary to popular belief, none of the methods of contraception apart from sterilization decrease fertility. Moreover, most of them offer numerous health benefits which aren't widely known. You will find more information on them in this guide, and you can also discuss them with your doctor. A responsible and enjoyable sex life also means protecting you and others from sexually transmitted diseases (STDs). In this way, preventing pregnancy and STDs will also help to maintain your fertility.

A wide selection of hormonal methods

The female sex hormones, estrogen and progesterin, regulate the ripening of egg cells in the ovaries and the thickness of the mucous membrane lining the wall of the uterus (endometrium). Hormonal contraceptives contain these same hormones or their synthetic analogues.

Hormonal methods of contraception can be divided into two groups:

Combined contraceptives, such as the vaginal ring, the transdermal contraceptive patch (birth control patch) and combined oral contraceptives (also known as birth control pills or the pill), contain estrogen and progesterin or their synthetic analogues. Their contraceptive action is mainly based on progesterin which prevents ovulation (the release of an egg from the ovaries). At the same time, the cervical mucus becomes impermeable to sperm. Estrogen contributes to the contraceptive action to a lesser extent, but it helps to keep the menstrual cycle regular.

Due to the research and development the hormone levels of contraceptives have been substantially reduced. This has been done in order to minimize the adverse effects without jeopardizing the contraceptive reliability. Combined contraceptives that contain less than 30 micrograms of estrogen or synthetic estrogen, ethinyl estradiol per day, are called low-hormone contraceptives. A vaginal ring releases ethinyl estradiol at a steady rate, 15 micrograms daily, and a birth control patch 20 micrograms daily. In modern combined oral contraceptives, the daily dose of ethinyl estradiol is 15 to 35 micrograms.

There are also **progesterin-only** contraceptives, such as the mini-pill, hormonal IUD and implantable and injectable contraceptives. Since they contain no estrogen, your period will not

occur as regularly as with combined contraceptives, but it will usually there will be less bleeding and in some cases the bleeding may stop altogether.

Hormonal contraceptives are available at pharmacies with a doctor's prescription. In general, after three or six months at the latest the doctor confirms whether or not the contraceptive is suitable for you. The frequency of further check-up appointments depends on your personal situation.

Barrier methods

Condoms, diaphragms and spermicides (substances that destroy sperm) are called barrier methods. All these methods prevent either mechanically or chemically sperm from entering the uterine cavity. Furthermore, condom is the only contraceptive that protects against STDs. **Using a condom is always recommended if you change the partner or if there is any risk of contracting an STD, even if you are using another method of contraception.**

Copper IUD and sterilization

The copper IUD is usually suitable for women who have given birth to a child and live in a steady relationship, but in some cases can also be used by women who haven't given birth. Sterilization is an irreversible procedure which is why it is regulated by law, and those considering it need to meet certain conditions.

Table of contents

Hormonal contraception:
Combined contraceptives

Hormonal contraception:
Progestin-only contraceptives

Barrier methods

Other methods

Combined hormonal contraceptives are known to have the following health benefits:

- **Effective contraception.** The number of pregnancies when used correctly is below one per one hundred women in a year.
- **Protection against extrauterine pregnancies,** as the egg cell is not released from the ovaries.
- **Timing of pregnancy.** Contraception enables the couple to plan the best time to start a family. Pregnancy is possible immediately after stopping the treatment.
- **Regulation of the menstrual cycle.** Helps women with irregular cycles.
- **Decreased bleeding.** Improves the quality of life and decreases the risk of iron-deficiency anaemia.
- **In most cases, alleviates menstrual pain, or stops it altogether.**
- **Easy scheduling of menstrual bleeding.** The period may also be timed to occur less frequently than once monthly.
- **Alleviation of pre-menstrual symptoms (PMS).**

- **Less damage from ovarian infections and infections of internal genital organs.** The condom is the only protection against STD's. However, combined hormonal contraception methods may, to a certain extent, protect against the infection spreading from the cervix to the internal genital organs.
- **Less benign tumours in breasts and ovaries.**
- **Alleviation of endometriosis** (a disease where endometrial tissue grows outside the uterus).
- **Decreases the risk of cancer of uterus or ovarian** by almost half after only one year use of combined hormones. The protective effect continues for up to 30 years after the treatment is stopped.
- **Decreases excessive body hair growth and alleviates acne.**
- **More enjoyable sex**
 - No fear of unwanted pregnancies, no last minute remembering to apply contraceptive at the moment of intercourse.

Potential disadvantages and contraindications of combined hormonal contraception

Combined hormonal contraception - Potential disadvantages

The use of combined hormonal contraceptives may involve some of the following side effects, especially during the first few months of use:

- **Headache**
- **Nausea**
- **Metrorrhagia**
- **Mood swings**
- **Increased weight and swelling**
- **Breasts tenderness**

Serious adverse effects, such as venous thrombosis, are rarely seen, especially if the user's health is good, the person is not overweight, or does not smoke. All combined hormonal contraceptives are, however, linked with a slightly increased risk of venous thrombosis.

Combined hormonal contraception - Contraindications of use, e.g.:

Previous incidence of venous thromboses or increased risk of venous thromboses, hormonally related cancer, blood pressure disorder, smoker older than 35 years, classic auricular migraine.

Combined hormonal contraception method cannot, however, be recommended to all women

Before starting the use of a hormonal contraceptive, consult your doctor or a contraception counsellor/the health care nurse in your school.

If the use of the combined hormonal contraception is not suitable, for some reason, alternatives include progestin-only (minipill, POP), a subcutaneous implant, an intrauterine device, or a condom.

Combined contraceptive

A combined contraceptive is usually the primary alternative for young women who are starting contraception as it regulates menstrual bleeding, reduces menstrual pain and offers many health benefits that maintain fertility. Modern low-hormone products are used more and more commonly up until the menopause, unless there is a particular contraindication to it such as smoking after the age of 35.

Other possible contraindications to combined contraceptives are a history of venous or arterial thrombosis (blood clots), or a known tendency to or relevant risk factors for thrombosis, such as smoking, being overweight, or suffering from migraines with auras. Possible contraindications should be discussed with your doctor.

Combined methods of contraception include the vaginal ring, the birth control patch and combined oral contraceptives. All methods are equally efficacious and have principally the same health benefits, potential hormonal adverse effects and contraindications. They differ from each other as regards the method and frequency of administration. One vaginal ring prevents pregnancy for three weeks, patches are replaced weekly on the skin and tablets are taken orally daily.

After one ring, three patches or one strip of tablets (usually 21 tablets), there is a one-week break, during which the withdrawal bleeding - your period - usually occurs.

One month's contraception with the different methods:

One ring +
one-week break



Three patches +
one-week break



21 tablets + one-week break
(most commonly)



Once a month: Vaginal ring

The vaginal ring is a flexible, thin plastic ring that is inserted in the vagina. It releases estrogen and progestin into the bloodstream through the vagina at a low and steady rate. The hormones prevent ovulation and alter the cervical mucus, making the entry of sperm into the uterus more difficult.

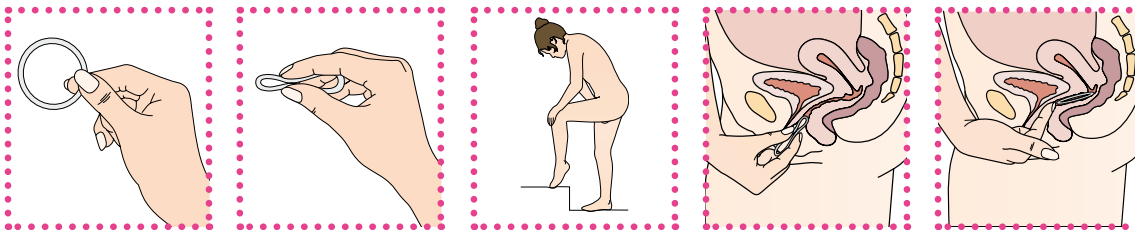
One ring is left in place in the vagina for three weeks, followed by a one-week break. A new ring is inserted in the vagina after the one ring-free week has passed. Menstrual bleeding usually occurs during the ring-free week.

The vaginal ring resembles oral contraceptives in many ways, but since the hormones from the vaginal ring do not pass through the digestive system, it provides the same contraceptive reliability with lower hormone doses.

Moreover, the vaginal ring releases the hormones at a very steady rate, which may explain, for example, the very good bleeding control it provides. The vaginal ring has the same potential adverse effects, as combined oral contraceptives such as breast tenderness, headaches, nausea or mood swings, which usually subside within a few months.

The vaginal ring is easy to insert and remove

Insertion



The vaginal ring is inserted by pressing it into an oval and using the index finger to push the folded ring far enough into the vagina until it cannot be felt. Since the contraceptive action is based on the hormones released by the ring, the exact position of the ring is not important. The ring returns to its circular shape in the vagina, which holds it in place. The shape and position of the vagina and the pelvic floor muscles also hold it in place.

Hormonal contraception: Combined contraceptives

Removal

The vaginal ring is removed by placing a finger inside the ring or by grasping the rim of the ring between the index and middle fingers. Once you feel the ring, hook your finger around it and pull it out. You can do this standing with one leg up on the toilet seat or on a chair, by squatting or lying down. If you find one position difficult, try another one.

The vaginal ring very rarely disturbs intercourse. If you feel the vaginal ring or if it disturbs either one of you, it can be temporarily removed from the vagina for the duration of the intercourse. However, the vaginal ring can only be out of the vagina for a maximum of 3 hours a day, so you have to remember to insert it back afterwards.

Pros

- stable and low hormone level
- only needs to be remembered when inserting and removing
- reduces the amount of menstrual bleeding and regulates the menstrual cycle
- scheduling menstrual bleeding is easy
- alleviates painful menstruation (dysmenorrhoea)
- lets you control your contraception
- inconspicuous method

Cons

- not suitable for women with contraindications to combined hormonal contraception (please see Combined contraceptives)



Once a week: Birth control patch

The patch releases estrogen and progestin at a steady rate through the skin into the bloodstream. The hormones prevent ovulation and alter the cervical mucus, making the entry of sperm into the uterus more difficult. One patch provides contraception for one week, after which it must be replaced. After three consecutive weeks of wearing a patch there is a patch-free week, during which menstrual bleeding usually occurs.

The patch is applied on clean, dry, hairless skin in a place on the body where it will not be rubbed by tight clothing. The patch can be placed on a buttock, the abdomen, upper back or upper arm. The patch must never be applied twice in the same place. This is to reduce the risk of skin irritation.

The birth control patch resembles oral contraceptives, but since the hormones from the

patch do not pass through digestion, the same contraceptive reliability is achieved with lower hormone doses.

The patch has the same potential adverse effects, as combined oral contraceptives such as breast tenderness, headaches, nausea or mood swings, which usually subside within a few months.



Pros

- stable hormone level
- only needs to be remembered once a week
- reduces the amount of menstrual bleeding and regulates the menstrual cycle
- scheduling menstrual bleeding is easy
- alleviates painful menstruation (dysmenorrhoea)
- lets you control your contraception

Cons

- not suitable for women with contraindications to combined hormonal contraception (please see Combined contraceptives)

Hormonal contraception: Combined contraceptives

Once a day: Combined oral contraceptives

Combined oral contraceptives, also known as the pill, contain both progestin and estrogen. The hormones prevent ovulation and alter the cervical mucus, making the entry of sperm into the uterus more difficult. There are several brands of combined oral contraceptives on the market, differing in terms of the composition and quantity of the hormones.

Most combined oral contraceptives are taken once daily for three weeks, followed by a one-week break. In some products, the tablet-free days have been replaced with placebo tablets and/or a shorter break. However, the duration of the cycle, 28 days, is common to all of these products:

21 hormone-containing tablets + 7-day break

22 hormone-containing tablets + 6-day break

24 hormone-containing tablets + 4 placebo tablets (no breaks)

The most common adverse effects of combined oral contraceptives are the same as vaginal ring and birth control patch have, such as breast tenderness, headaches, nausea or mood swings, which usually subside within a few months.

Pros

- reduces the amount of menstrual bleeding and regulates the menstrual cycle
- scheduling menstrual bleeding is easy
- alleviates painful menstruation (dysmenorrhoea)
- lets you control your contraception

Cons

- must be remembered daily
- not suitable for women with contraindications to combined hormonal contraception (please see Combined contraceptives)

Hormonal contraception: Progestin-only contraceptives

Progestin-only products such as mini-pills, hormonal IUDs and contraceptive subcutaneous implants and injections do not contain estrogen; instead they only contain synthetic progestin. There are various synthetic progestins on the market, thus the suitability of the products can vary. If one product is not suitable for some reason, another one can be tried out. Progestin-only products can also be used during breastfeeding.

Progestin alters the consistency of the cervical mucus, making it impermeable to sperm. Progestin-only products also affect the ripening and release of egg cells, but the intensity of the

effect varies from one progestin-only product to another.

When progestin-only products are used, the total amount of menstrual bleeding usually reduced and menstrual pain is alleviated, but the products also commonly cause the menstrual cycle to become irregular. For some, menstrual bleeding stops altogether. All progestin-only products can be associated with the following hormonal adverse effects: nausea, headaches, breast tenderness and changes in weight, mood and sexual desire, but these usually subside within a few months.



Hormonal contraception: Progestin-only contraceptives

Mini-pills

There are different kinds of mini-pill brands on the market that differ in terms of the progestin derivative and the hormone quantity in the tablet, and therefore their efficacy varies.

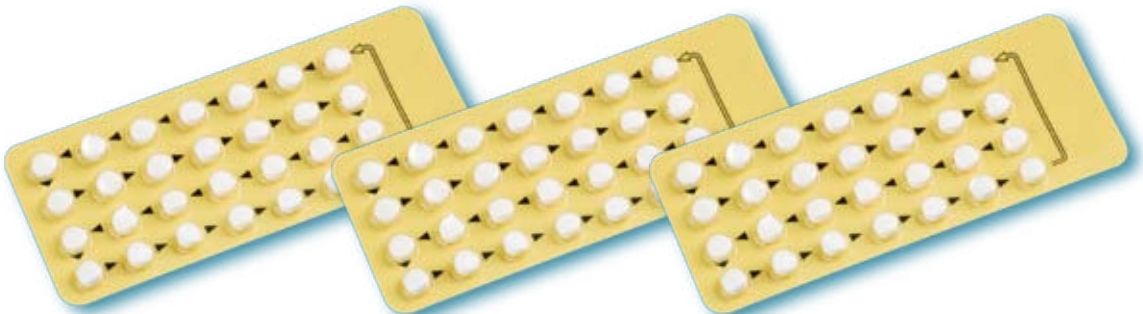
One mini-pill is taken daily without breaks. When a pill strip is finished, a new one should be started the very next day. There are differences between products as to how much the intake time can deviate. In traditional mini-pills the deviation can be three hours, whereas for progestin tablets that prevent ovulation similarly to combined contraception, a deviation of 12 hours is allowed. The contraceptive reliability of the latter is equivalent to combined hormonal contraception.

Pros

- usually suitable for women who cannot use estrogen
- can also be used during breastfeeding
- lets you control your contraception
- tablets are taken daily without breaks, which helps with remembering to take them
- alleviates menstrual pain and usually reduces the amount of bleeding

Cons

- irregularity of bleeding/spotting (often the bleeding becomes less frequent and/or reduced, or it stops altogether)
- must be remembered daily



Contraceptive implant (rod)

The implant is especially suitable for women who need long-term contraception. Depending on the product, a doctor inserts one or two small and thin contraceptive rods under the skin of the arm. The procedure is performed under local anaesthesia. The implants available in Finland contain only progestin which the rod releases gradually and steadily into the bloodstream. The implant is effective for 3 to 5 years, depending on the product. The implant cannot be seen under the skin but can be felt.

The contraceptive action is primarily based on preventing ovulation (there are differences between products) and changing the consistency of the cervical mucus, making the entry of sperm into the uterus more difficult.

Pros

- usually suitable for women who cannot use estrogen
- no chance of forgetting
- long-term contraception
- can also be used during breastfeeding
- alleviates menstrual pain and usually reduces the amount of bleeding

Cons

- irregularity of bleeding/spotting (often the bleeding becomes less frequent and/or reduced, or it stops altogether)
- implanted and removed by a doctor



Hormonal contraception: Progestin-only contraceptives

Hormonal IUD

The hormonal IUD is inserted into the uterus where it releases progestin at a steady rate for five years.

The hormonal IUD is a T-shaped, plastic contraceptive device which is placed in the uterus by a doctor. Similarly to the copper IUD, it is most suitable for women who have already given birth to a child. The hormonal IUD releases synthetic progestin at a steady rate into the uterus. After insertion, the lining of the uterus turns into a sort of a resting state within a few months. Spotting commonly occurs after it is first inserted, sometimes for as long as six months. For most women, however, menstrual bleeding reduces considerably, and for one in five women, menstrual bleeding stops altogether in the course of time.

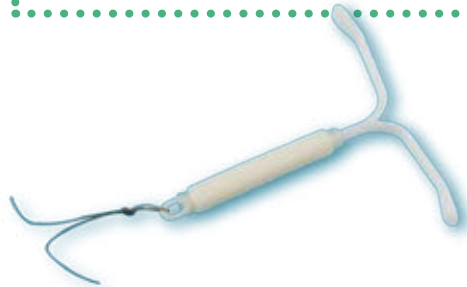
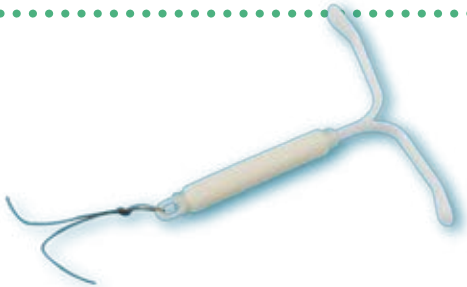
The contraceptive action of the hormonal IUD is primarily based on its local effect on the uterus. The cervical mucus is also altered, making the entry of sperm into the uterus more difficult. Moreover, the hormonal IUD interferes with ovulation, fertilization and the implantation of the egg cell in the lining of the uterus. A hormonal IUD is effective for five years.

Pros

- usually suitable for women who cannot or do not want to use estrogen
- no chance of forgetting
- long-term contraception
- can also be used during breastfeeding
- reduces heavy menstrual bleeding and alleviates menstrual pain

Cons

- irregularity of bleeding/spotting (often the bleeding becomes less frequent and/or reduced, or stops altogether)
- inserted and removed by a doctor



Contraceptive injection

Hormones used for contraception can also be administered by injection into a muscle in the buttock or upper arm. Only one injectable product is available in Finland and it contains synthetic progestin. Hormones administered by injection pass directly from the muscle over to the bloodstream. Progestin prevents ovulation but also alters the cervical mucus, making the entry of sperm into the uterus more difficult. Injections are given every three months but on average fertility will return 10 months after the last injection. In addition to other potential hormonal adverse effects typical to progestin-only products, contraceptive injections have been found to lower bone density which is why their use has been limited. The injection is recommended for long-term contraception (e.g. for over 2 years) only when other methods are not suitable.

Pros

- usually suitable for women who cannot or do not want to use estrogen
- no chance of forgetting
- one injection provides contraception for three months
- can also be used during breastfeeding
- alleviates menstrual pain and usually reduces the amount of bleeding

Cons

- irregularity of bleeding/spotting especially at the beginning of use
- public health nurse injects every three months
- fertility returns after a delay
- risk of osteoporosis when used long-term (more than two years)



Barrier methods

In case of multiple sexual partners or if a relationship is not steady, it is advisable to use a method of contraception that also protects against STDs, either alone or in combination with other contraception.

Male condom

The condom is a thin, single-use, latex rubber sheath placed over an erect penis. Sperm cells discharged from the penis in ejaculation remain inside the condom, and thus cannot enter the woman's vagina. There are a variety of condoms to choose from. They come in different colours, sizes and shapes; either smooth or textured. Some are even scented or flavoured.

When used correctly, the condom protects against STDs and prevents pregnancy, but errors in use reduce the contraceptive reliability significantly. Always follow the instructions below:

- Always check that the wrapping covering the condom is intact and that the condom has not expired. Remember that condoms are sensitive to frost and direct sunlight which make them brittle.
- Put the condom over the penis following the instructions and be careful not to puncture the thin surface of the condom, for example with your fingernails. It is worthwhile practising in advance.
- The condom should be used throughout intercourse since sperm may also be discharged from the penis before the actual ejaculation.
- The penis and the condom protecting it should be pulled out of the vagina straight after intercourse before the penis softens. Hold your hand on the base of the condom so that the condom will not slip off the penis.

Pros

- easily available
- protects against STDs

Cons

- putting on requires care
- can slip off or break and must be taken off straight after intercourse



Female condom

A female condom is a pouch-like, single-use sheath manufactured from polyurethane plastic. It lines the vaginal walls from inside and thus prevents the entry of sperm into the uterus. The female condom is available in one size and colour. The condom contains a spermicide and an oil-like lubricant. The inner ring is inserted in the base of the vagina and the outer ring at the open end of the pouch remains outside the external genitals.

Pros

- provides women with the option to use a method of contraception that protects against STDs
- protects against STDs more effectively than the male condom since it also partly protects the external female genitals

Cons

- insertion requires care



Diaphragm

The diaphragm is a soft, cup-like contraceptive product that is about the size of a palm and made out of thin rubber. Before intercourse, the diaphragm is inserted in the base of the vagina against the opening of the uterus with the cup-side up. The diaphragm can be inserted either by hand or with a special applicator. The diaphragm is not intended for one-time use; it is washed after every use. The diaphragm is stored in its own casing to keep it clean and undamaged. To achieve adequate contraceptive reliability, the diaphragm must always be used together with a spermicide. Diaphragms are not sold in Finland at the moment, but available over the internet.

Chemical contraceptives or spermicides

There are several chemical contraceptives that are inserted in the vagina: vaginal contraceptive suppositories, foams, creams, gels and vaginal tablets. Of these, only the vaginal suppository is sold in Finland. It is inserted deep into the vagina before intercourse. The suppository dissolves in the vagina and after some 10 minutes, forms fine foam. The foam acts by forming a film inside the vagina that prevents sperm from moving forward. If sperm cells come into contact with the foam, they are destroyed.

The suppository stays effective for 1 to 2 hours. Despite this, with each new act of intercourse a new suppository must be inserted in the vagina, even if less than an hour has passed since the last time. The use of contraceptive suppositories is associated with inaccuracies which reduce their reliability. Therefore, their use is recommended only in combination with a condom.



Copper IUD

The copper IUD is usually a T-shaped object made of plastic and copper, which is inserted into the uterus by a doctor. The copper IUD is most suitable for women who have had children and live in a steady relationship. The IUD is replaced every five years.

The exact way the copper IUD works is not known, but it changes the conditions in the uterus and Fallopian tubes so that they become disadvantageous for sperm, disturbing normal fertilization and often preventing fertilization entirely. If fertilization were to take place, the implantation of the fertilized egg in the lining of the uterus is prevented in most cases.

The adverse effects of a copper IUD can include lower abdominal cramps, pain in the small of the back and often increased menstrual pain and heavier menstrual bleeding.

Pros

- no chance of forgetting
- long-term contraception

Cons

- not suitable for women who usually have heavy or painful periods
- not suitable for women allergic to copper
- inserted and removed by a doctor



Sterilization

The most extreme method of contraception is sterilization because it is considered to be virtually irreversible. Sterilization is the only method of contraception that is monitored by law. Under Finnish law, sterilization can be applied for based on medical or social reasons or if other methods of contraception are unsuitable. Sterilization can also be granted on the basis of age or the number of children, if you are over 30 years of age or already have at least three minor children. It is important to remember that even sterilization does not guarantee a hundred per cent failure-free contraceptive reliability.

Male sterilization (vasectomy) is a simple procedure that can be performed under local anaesthesia. In this procedure, the vas deferens (tubes carrying sperm) coming from the testicles are cut at the base of the scrotum. After sterilization, the man is able to ejaculate normally, but the semen does not contain sperm - only fluid produced by the seminal gland and the prostate.

Female sterilization is in the majority of cases performed as a laparoscopic day surgery procedure under general anaesthesia and requires a few days of sick leave. In such cases the procedure does not require opening the abdominal cavity. A small incision under the navel is sufficient and the Fallopian tubes are blocked by compressing them with clips through an endoscope. In sterilization performed after childbirth, the Fallopian tubes are cut. After sterilization, an egg cell cannot move along the Fallopian tube towards the uterus and possible fertilization is therefore prevented.

Pros

- trouble-free once the procedure has been performed

Cons

- requires a surgical procedure
- permanent

Emergency contraception (postcoital contraception)

Emergency contraception is not an actual method of contraception. It should be considered a last resort to turn to if your regular contraception fails, for example if a condom breaks or if you forget to take the pill on time. Emergency contraception can be carried out in two ways, either with emergency contraceptive pills (ECP) or with a copper IUD inserted to the uterus by a doctor.

Emergency contraceptive pill (ECP)

The ECP is intended for temporary use. Individuals over 15 years of age can purchase a package in the pharmacy without a doctor's prescription. Persons under the age of 15 years can get it via their health centre. The progestin-containing ECP should be taken as soon as possible after intercourse but at the latest within three days, i.e. 72 hours. The later the tablet is taken, the more uncertain the contraceptive reliability becomes. The ECP is not suitable for frequent use because the single dose of hormone contained in it is many times higher compared to oral contraceptives. A couple should therefore ensure regular and reliable contraception with another method.



More information:
www.ehkaisy.com



More information: Schering-Plough Oy, tel. 020 757 0300, fax 020 757 0301, www.schering-plough.fi, www.ehkaisy.com