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Intrauterine System (IUS)

The intrauterine system (IUS) is a very effective method of contraception. Some types of IUS may also be used to treat heavy periods (menorrhagia). The IUS sits inside the womb (uterus). Once fitted, it works as a contraceptive for as long as you need it to, up to between three or five years, when it needs to be replaced. Most women who use an IUS have no problems with it. It is sometimes called a 'hormone coil' because in the 1960s some intrauterine contraceptives were coil-shaped.

What is the intrauterine system?

The intrauterine system (IUS) is a small, flexible, plastic device which sits inside the womb (uterus). There are two threads attached to it which pass out through the neck of the womb (cervix) and lie in your vagina (see diagram below). These allow you to check it is still there. They also mean it can be removed easily. They do not hang outside the body and your partner should not be able to feel them during sex (intercourse).

The IUS looks like an [intrauterine contraceptive device \(IUCD\)](#) - also known as the 'contraceptive coil' or copper intrauterine device (Cu-IUD). However, the IUS does not contain copper; it contains slow-release progestogen hormone called levonorgestrel. It is therefore called an intrauterine 'system' (IUS) and not an IUCD. It is often abbreviated to LNG-IUS.

There are several types of IUS available. They are all T-shaped (the two side arms fold flat for insertion and fold up for removal) and about the length of a matchstick. The inside of the womb itself is only a little longer than a matchstick, so the IUS fits neatly inside. The IUS can be put quite easily into a woman's womb by a trained doctor or nurse.

The different types of IUS vary according to their size and how much hormone they contain.

- Mirena® was the first IUS. It is the largest and contains 52 mg levonorgestrel.
- Liletta® and Eloira® are similar to Mirena® and also contain 52 mg levonorgestrel.
- Kyleena® is smaller than Mirena® and contains 19.5 mg levonorgestrel.
- The IUS with the least amount of hormone is called Jaydess® (Skyla® in the USA). It is the same size as Kyleena® but contains only 13.5 mg levonorgestrel.

Mirena® and Eloira® are the only IUS that are also used for treating [heavy periods](#). They can also be used to provide the progestogen part of [hormone replacement therapy \(HRT\)](#).

Note: the various types of IUS may go by different names in different countries and may not all be available where you live.

How does the intrauterine system work as a contraceptive?

The IUS works differently to the Cu-IUD because instead of copper it contains levonorgestrel, a progestogen hormone. The hormone thickens the mucus in the neck of the womb (cervix). This forms a plug which stops sperm getting through to the womb (uterus) to fertilise an egg. The hormone also makes the lining of your womb very much thinner. This makes it unlikely that if an egg does manage to get fertilised, it will be able to implant there. (Also, as a consequence, it makes your periods very much lighter - indeed they may disappear altogether.) In some women the IUS prevents an egg being released as well, so that it happens less often or not at all. However, this is usually not the case, even if your periods are absent when using the IUS, particularly with the lower-dose IUS.

How effective is the intrauterine system for contraception?

The IUS is extremely effective. Around 2 women in 1,000 using the IUS will become pregnant each year. (Compare this with rates of pregnancy when no contraception is used. More than 800 in 1,000 sexually active women who do not use contraception become pregnant within one year. This figure rises to 950 in two years.)

What are the advantages of the intrauterine system?

Effective contraception

Once an IUS is inserted you no longer need to use other contraception for between three and five years. So, unlike users of the [contraceptive pill](#), you do not have to think about contraception every day. The IUS does not interfere with having sex (intercourse) or with sex drive (libido). Although it contains progestogen, the quantity of the hormone which gets into your general system is very low. It does not usually therefore cause the side-effects which can occur with higher doses of hormones (for example, in [progestogen-only injectable contraceptives](#)).

Period problems improve

Periods usually become lighter, less painful and often stop, unlike with the copper IUD. After 12 months most users only have a light bleed for one day per month or so, and about 1 in 5 users of the Mirena® IUS have no bleeding at all. This is why an IUS can be so good at treating **heavy periods** (menorrhagia), painful periods (dysmenorrhoea) and **endometriosis**.

Easily reversible

Fertility returns as soon as the IUS is removed, although regular periods (menstruation) sometimes take a few months to return.

Not just for contraception

The 52 mg LNG-IUS (Mirena® or Eloira®) does not have to be used as contraception. It can also be used as a treatment for **heavy periods**, **endometriosis** and **fibroids**. The IUS that contain less hormone (Jaydess®/Skyla® and Kyleena®) are not suitable to treat these conditions.

What are the disadvantages of the intrauterine system?

Although the majority of women with an IUS have no problems, the following may occur:

Irregular bleeding

You may have irregular bleeding for the first three to six months. This usually settles down. It is usually a light 'spotting' of blood which women can find a nuisance.

Heavier bleeding can occasionally occur. If you experience heavy bleeding or a marked change in bleeding pattern you should discuss this with your doctor. It may mean the IUS has come out without you realising, or could be a sign of infection or pregnancy.

Ectopic pregnancy

A pregnancy developing outside the womb (uterus), usually in the Fallopian tube, is known as an **ectopic pregnancy** and is very unusual with the IUS. This is because the IUS protects against this sort of pregnancy. However, if you do develop one-sided tummy (abdominal) pain with bleeding you should discuss this with a doctor.

Expulsion

The IUS may come out without you noticing (expulsion). This happens to 1 woman in every 20. It usually happens in the first year, particularly in the first three months, during your period. It seems it is slightly more likely to happen if it has happened to you before.

It is a good idea to check you can feel the threads of the IUS after your period. If you cannot feel them, you should use extra precautions such as a condom, until your doctor or nurse has checked the IUS is still there.

If the IUS has come out in the previous few days you may need emergency contraception. If the IUS could have come out more than a few days previously, and you are sexually active, the doctor or nurse will need to make sure you are not already pregnant before fitting another one or starting alternative contraception.

Damage to the womb

The fitting of an intrauterine contraceptive can (very rarely) make a small hole in the womb - this is called perforation. It protrudes through the wall of the womb and can escape into your tummy. This happens in fewer than 2 women per 1,000, usually at the time of fitting. It can cause pain, but this is not usually severe and often there is no pain. The main symptom is not being able to feel the threads. Your womb will heal on its own but you may need an operation to remove the IUS from your tummy.

You should tell your doctor or nurse if you can no longer feel the threads of your IUS. This can mean perforation has occurred. However, far more commonly it means that the threads are tucked up inside the neck of the womb (cervix). Rarely, it can be because the threads have come off the IUS. An **ultrasound scan** will be carried out to find a lost IUS. If ultrasound does not find the IUS, an **X-ray** will be ordered.

Hormonal side-effects

Hormonal side-effects are uncommon. The progestogen released by the IUS mainly stays around the womb and very little gets into the bloodstream. So hormone side-effects are less common than with the **progestogen-only pill** and the **contraceptive injection** or **implant**.

If side-effects do occur, they tend to develop in the first few months. They then tend to ease and go. Examples of possible side-effects include:

- Mood swings.
- Reduced sex drive (libido).
- Fluid retention.
- Increase in acne.
- Breast discomfort.
- A slight increase in breast size - this can occur in the first few months but is usually temporary.

There is no evidence that women with an IUS put on weight.

The IUS does not protect you against any **sexually transmitted infections (STI)**. If you have a new sexual partner, you should always use a condom, until you have both been checked for any STI.

Who cannot use the intrauterine system?

The IUS cannot be used as emergency contraception. If you think you need **emergency contraception** contact your health professional as soon as you can; you can then be fitted with a copper intrauterine device (Cu-IUD) or be given emergency contraceptive pills. Your doctor or family planning nurse will discuss your medical history and will need to ask you some personal questions about your sex life. You may need to have tests done to look for STIs, such as **chlamydia** and **gonorrhoea**, but you will probably still be able to have an IUS fitted while you are waiting for the results, unless you have symptoms.

If you have recently been pregnant, it is recommended that you wait four weeks to have your IUS fitted (although it can safely be fitted at the time of an abortion or within 48 hours of the birth of a baby, but it may be slightly more likely to come out).

Some illnesses may mean you cannot use progestogen-based contraceptives, such as the IUS. These include:

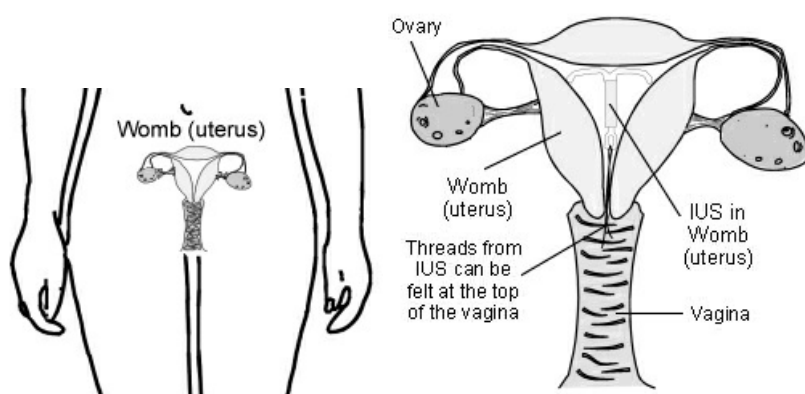
- An infection which has not been treated.
- Recent (in the preceding five years) breast cancer,
- Cancer of the lining of the womb (endometrial cancer).
- Cancer of the neck of the womb (cervical cancer)
- Very large fibroids.
- HIV: some women with HIV may not be able to use an IUS if the medicines they take might interfere with the hormone in the IUS.

In practice, the number of women who cannot have the IUS inserted is small.

How is the intrauterine system fitted?

This is usually done towards the end of a period or shortly afterwards, as this tends to be more comfortable for you. Also, the doctor can be sure that you are not pregnant. However, it can be fitted at any time provided that you are certain you are not pregnant. You will need to have a vaginal examination. The doctor or nurse will pass a small instrument into your womb (uterus) to check its size and position. A clip is put on to the neck of your womb (cervix) and the inside of your uterus is measured. The IUS is then fitted using a small plastic insertion device.

You will be taught how to feel the threads of the IUS so you can check it is in place. It is best to check the threads regularly - for example, once a month just after a period.



The procedure can be painful, like an intense period cramp, but the pain usually lasts only a minute or two. After the IUS is fitted, some women have crampy pains like period pains for a few hours. These can be eased by painkillers such as **paracetamol** or **ibuprofen**. Light vaginal bleeding may also occur for a short while.

The Jaydess®/Skyla® and Kyleena® IUS are narrower than a 52 mg LNG-IUS. This may make them easier and less painful to have fitted.

Does the intrauterine system work straightaway?

If the IUS is fitted within seven days after the start of a period, it is immediately effective as a contraceptive. If it is fitted after the seventh day then you need to use extra protection such as condoms for seven days.

Note: the IUS is **not** effective as emergency contraception.

Follow-up

The doctor or nurse will usually want to check that there are no problems a few weeks after fitting your IUS. It is best done after your next period. After this, there is no need for any routine check until it is time to remove the IUS. However, see your doctor or nurse at any time if you have any problems or queries.

Most women have no problems and the IUS can remain in place for between three and five years, depending on the device fitted. However, if you are 45 years or over at the time of fitting, it can safely be left in place (and will remain effective) until your menopause.

If you are younger than this and you wish to continue to use this form of contraception, the IUS needs to be replaced every:

- Five years - Mirena®, Eloira® and Kyleena®.
- Four years - Liletta®.
- Three years - Jaydess®/Skyla®.

If you are not using your IUS for contraception

If you are using a 52 mg LNG-IUS as part of HRT (and not for contraception), most doctors are happy for it to be left in place for five years, although the manufacturer recommends replacing it after four years. If you are using it only to treat heavy periods, you can keep it in place for as long as it continues to be effective (although generally it is removed once you are 55).

Removing and changing the intrauterine system

The IUS can be removed at any time by a trained doctor or nurse.

You will be able to get pregnant as soon as it is removed. If you plan to have it removed, but do not want to get pregnant, use other methods of contraception (such as condoms) from seven days *before* it is removed. This is because sperm can last up to seven days after you have had sex (intercourse) and can fertilise an egg AFTER the IUS is removed.

If you have had your IUS for its maximum effective time, it will need to be changed. You will need to use other forms of contraception from seven days *before* it is removed. This is because occasionally when the IUS is removed the neck of your womb (cervix) clamps tightly shut for a while. The doctor cannot therefore immediately insert the new IUS. As sperm can last up to seven days in the womb (uterus) they could therefore fertilise an egg whilst you are waiting for your replacement IUS fitting.

You can use sanitary towels, tampons or a Mooncup® for your period with an IUS in place. A cervical smear can also be taken with an IUS in place. Sometimes, the smear result may show that there is an organism in the cervix; these are called actinomyces-like organisms (ALOs). These are normal and do not mean the IUS should be removed. However, if you have had pelvic pain together with signs of infection, such as a temperature, your doctor may consider removing the IUS.

You should consult a doctor if any of the following occur:

- Prolonged tummy (abdominal) pain after an IUS is inserted.
- Vaginal discharge with or without pain. This may indicate infection.
- You can't feel your threads and suspect that the IUS has come out or is coming out. If you cannot feel the threads or feel something that feels like the head of a match, then use other contraception (such as condoms or not having sex) until you have been checked by a doctor or nurse.

Further reading & references

- [Intrauterine Contraception](#); Faculty of Sexual and Reproductive Healthcare Clinical Effectiveness Unit (2015)
- [Long-acting reversible contraception](#); NICE Clinical Guideline (September 2014)
- [Bayer Kyleena Education Pack](#); Differentiation of Mirena, Jaydess and Kyleena. June 2017
- [Lethaby A, Hussain M, Rishworth JR, et al; Progesterone or progestogen-releasing intrauterine systems for heavy menstrual bleeding. Cochrane Database Syst Rev. 2015 Apr 30;4:CD002126. doi: 10.1002/14651858.CD002126.pub3.](#)
- [UK Medical Eligibility Criteria Summary Table for intrauterine and hormonal contraception](#); Faculty of Sexual and Reproductive Healthcare, 2016

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