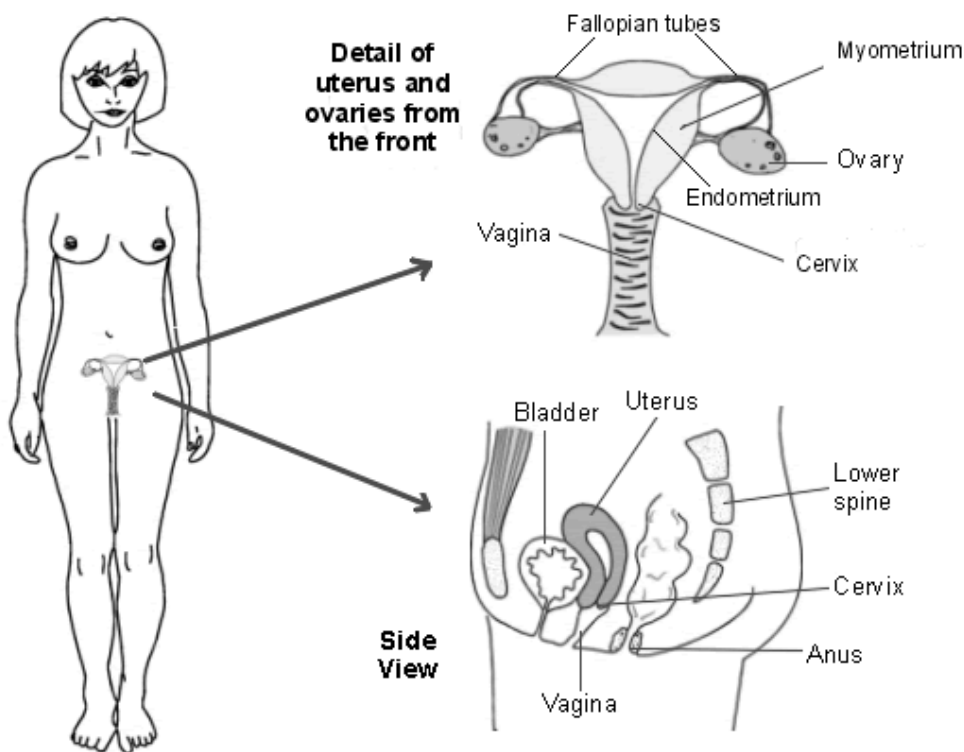


Ovarian cyst

Ovarian cysts are fluid-filled pockets that grow on the ovaries. Almost all ovarian cysts are non-cancerous (benign), but some are cancerous (malignant), or may become cancerous over time. Many people with ovarian cysts don't have any symptoms or require any treatment, as many go away on their own. However, some ovarian cysts may need removal with an operation.



What is an ovarian cyst?

An ovarian cyst is a fluid-filled sac which develops on one of the ovaries. Some types of cyst are entirely normal: small cysts called follicular and luteal cysts develop during a normal menstrual cycle, and disappear by the time of the next cycle. Other types of ovarian cysts can develop and remain for longer, sometimes causing symptoms.

Ovarian cyst symptoms

Most ovarian cysts are small, non-cancerous (benign), and cause no symptoms. However, some ovarian cyst symptoms may include one or more of the following:

- Pain or discomfort in the lower tummy (abdomen).

- [Periods sometimes become irregular, or may become heavier or lighter than usual.](#)

What does ovarian cyst pain feel like?

Ovarian cyst pain varies between different women. It may be sharp or dull; it may come and go or be present all the time; it may or may not be affected by your menstrual cycle (you may also develop irregular periods or spotting between periods). If an ovarian cyst bursts or gets twisted, it can cause sudden, very severe pain.

Ovarian cyst pain usually occurs on one side, but it can be in your lower tummy, deep down in the pelvis or both. The main symptom can be a dull ache or discomfort related to feeling bloated. [Pain may only occur when you have sex.](#)

What causes ovarian cysts?

Cysts caused by ovulation

In the early stages of every menstrual cycle, the ovaries normally develop small cyst-like structures called follicles. When ovulation happens, an egg is released from one of these follicles. If a normal follicle keeps on growing, it becomes a 'follicular cyst'. This type of cyst usually disappears within two or three cycles.

Normally, after an egg is released from a follicle, the follicle turns into a gland called the 'corpus luteum'. The corpus luteum produces hormones (mostly progesterone) in preparation for pregnancy. If pregnancy occurs, hormones from the corpus luteum ensure that the developing fetus gets enough blood supply; eventually, the placenta takes over and the corpus luteum shrinks. If pregnancy doesn't happen, the corpus luteum shrinks and disappears. However, sometimes, the corpus luteum can fill with fluid or blood, causing a 'luteal cyst'.

Follicular and luteal cysts are both called 'functional' cysts', because they develop as part of the normal functions of the menstrual cycle.

Cysts caused by other medical conditions

Some types of cyst occur because of another condition, such as:

- [Endometriosis.](#)
- Hormone changes (including fertility drugs).
- Pregnancy.
- A severe pelvic infection ([pelvic inflammatory disease](#)).

Cysts caused by abnormally growing cells

Some types of cyst form because of a problem in the way in which cells grow.

For example, dermoid cysts occur when skin-forming cells get trapped in the wrong place during early development as a fetus. Over time, these cells grow and produce skin and related tissues inside a cyst.

A certain type of cyst, called a cystadenoma, develops because of genetic mutations within cells, causing them to keep growing when they shouldn't.

See below for more information about cystadenomas and dermoid cysts.

Ovarian cancer is a rare cause of ovarian cysts. Exactly why cancer develops is very complicated, and not fully understood. We do know, though, that cancer cells develop genetic changes which allow them to grow rapidly and spread to other areas of the body.

Types of ovarian cysts

Ovarian cysts are very common. They can vary in size - from less than the size of a pea to the size of a large melon (occasionally even larger). There are various types of cysts which include:

Functional ovarian cysts

These are the most common type of ovarian cyst. They form in women of childbearing age (women who still have periods). They are very common, and develop, then disappear, as part of the normal menstrual cycle. Sometimes, they grow unusually large, or stay present for longer than one cycle. There are two types:

- **Follicular cysts.** A follicle (see 'What causes ovarian cysts?', above) can sometimes enlarge and fill with fluid. They can occur commonly in women who are receiving infertility treatment.
- **Corpus luteum cysts.** These occur when the corpus luteum (see in 'What causes ovarian cysts?' above) fills with fluid or blood to form a cyst. A blood-filled cyst is sometimes called a haemorrhagic cyst.

Functional cysts usually cause few, or no, symptoms. They often disappear with time, and usually don't require any treatment. Many women will have these at some point without ever knowing; they are commonly seen on ultrasounds whilst looking for something else.

Dermoid cysts (sometimes called benign mature cystic teratomas)

Dermoid cysts tend to occur in younger women, most commonly being diagnosed between the ages of 20 and 40. These types of ovarian cysts can grow quite large - up to 15 cm across. These cysts often contain odd contents such as hair, parts of teeth or bone, fatty tissue, etc. This is because these cysts develop from stem cells, which make skin cells and other similar cells. These stem cells are normally found in the skin, but, in the case of a dermoid cyst, they have become 'trapped' in the wrong area during early development as a fetus.

In about 1 in 10 cases a dermoid cyst develops in both ovaries. Dermoid cysts can run in families.

Cystadenomas

These develop from cells which cover the outer part of the ovary. There are different types. For example, serous cystadenomas fill with a thin fluid and mucinous cystadenomas fill with a thick mucous-type fluid. These types of cysts are often attached to an ovary by a stalk rather than growing within the ovary itself. Some grow very large. They are usually benign but some are cancerous.

Endometriomas

Many women who have endometriosis develop one or more ovarian cysts. Endometriosis is a condition where endometrial tissue - the tissue that lines the womb (uterus) - is found outside the uterus. It sometimes forms cysts which fill with blood. The old blood within these cysts looks like chocolate, and so these cysts are sometimes called chocolate cysts. They are benign. [See the separate leaflet called Endometriosis for more information.](#)

Polycystic ovary syndrome (PCOS)

Polycystic means many cysts. Women with PCOS can develop many tiny benign ovarian cysts. The cysts develop due to a problem with ovulation, caused by an hormonal imbalance. PCOS is associated with period problems, reduced fertility, hair growth, obesity, and acne. [See the separate leaflet called Polycystic Ovary Syndrome for more detail on PCOS.](#)

Some women have polycystic ovaries - ovaries with many cysts on them - but don't have PCOS. This is actually very common: up to 1 in 3 women who have ultrasound scans in research studies have polycystic ovaries without PCOS. It's more common in younger women, but tends to go away over time. Polycystic ovaries - without PCOS - are essentially normal, and they don't mean that there is a problem.

Others

There are also other rare types of ovarian cysts. There are also various types of benign ovarian tumours which are solid and not cystic (do not have fluid in the middle).

Complications with ovarian cysts

- Although most cysts are benign, some types have a risk of becoming cancerous. ([See the separate leaflet called Ovarian Cancer for more details.](#))
- Rarely, some ovarian cysts make abnormal amounts of female (or male) hormones which can cause unusual symptoms.
- Sometimes a cyst may bleed into itself, or burst. This can cause a sudden severe pain in the lower abdomen, which is the most common ovarian cyst symptom.

- Cysts, particularly large ones, can cause the entire ovary to twist on itself (ovarian torsion). The blood supply to the ovaries can become blocked, meaning that the ovary is no longer getting enough blood. Ovarian torsion tends to cause sudden, severe pain in the lower abdomen.
- Large cysts can cause the abdomen to swell, or press on nearby structures. For example, they may press on the bladder or rectum, which may cause urinary symptoms or [constipation](#).

How is an ovarian cyst diagnosed?

As most ovarian cysts cause no symptoms, many cysts are diagnosed by chance - for example, during a routine examination, or if women have an ultrasound scan for another reason.

If there are symptoms suggestive of an ovarian cyst, a doctor may examine the tummy (abdomen) and perform an internal (vaginal) examination. They may be able to feel an abnormal swelling which may be a cyst.

[An ultrasound scan can confirm an ovarian cyst](#). An ultrasound scan is a safe and painless test which uses sound waves to create images of organs and structures inside the body. The probe of the scanner may be placed on the abdomen to scan the ovaries. A small probe is also often placed inside the vagina to scan the ovaries, to obtain more detailed images.

[A blood test](#) called a CA-125 test is often done as well as an ultrasound scan. If this test is normal it is unlikely the cyst is cancerous. A normal CA-125 result, plus a reassuring ultrasound scan, can rule out cancer.

Some women may have other tests - for example, a [computerised tomography \(CT\) scan](#) or a [magnetic resonance imaging \(MRI\) scan](#). For the most common type of benign ovarian cysts this is not needed. It may be useful when the ultrasound scan is not conclusive and/or the CA-125 result is higher than normal.

Ovarian cyst treatment

Your doctor will discuss the treatment options with you. This depends on factors such as:

- Age.
- Whether someone is past the [menopause](#).
- The appearance and size of the cyst from the ultrasound scan.
- Whether there are any symptoms.

How long do ovarian cysts last?

Many small ovarian cysts will resolve and disappear over a few months. Sometimes, they can just be left alone without any further tests. At other times, a repeat ultrasound scan after a few months might be recommended, to check that it has disappeared.

Operation

If the cyst is causing symptoms, or is very large, removal of the ovarian cyst may be advised.. Sometimes, it's hard to tell exactly what type of cyst is present from the ultrasound alone, and doctors may want to remove the cyst to determine what type of cyst it is, and to make sure there are no cancer cells in it. Most smaller cysts can be removed by 'keyhole' ([laparoscopic](#)) surgery. Some cysts require a more open style of operation, with a cut in the lower part of the tummy.

The type of operation depends on factors such as the type of cyst, age, and whether cancer is suspected or ruled out. In some cases, just the cyst is removed and the ovary tissue preserved. In some cases, the ovary is also removed, and sometimes other nearby structures such as the womb (uterus) and the other ovary. The right options differ from person to person, and gynaecologists will advise on what options they think are suitable.

Endometriosis-related cysts and polycystic ovary syndrome (PCOS)

See the separate leaflets called [Endometriosis](#) and [Polycystic Ovary Syndrome](#) for information on these conditions and their treatment.

Ovarian cysts and fertility

Most ovarian cysts do not cause fertility problems. However, some do, and sometimes treatment for ovarian cysts can also affect fertility.

Functional ovarian cysts happen as a result of the normal menstrual cycle - so functional ovarian cysts actually suggest that ovulation is happening naturally. They usually don't affect fertility. If they grow large enough, they might affect the function of the ovary, or lead to ovarian torsion - but this is rare.

Cystadenomas and dermoid cysts typically don't affect fertility directly. However, they might cause fertility problems if complications develop (such as ovarian torsion). Surgery to remove these cysts may also need to remove some or all of the ovary (particularly if they've become large), which can affect fertility.

This can be a particular problem when cysts are present in both ovaries. For example, about 1 in 10 people with dermoid cysts have them in both ovaries, meaning that an operation may need to remove tissue from both ovaries, potentially reducing fertility.

Endometriomas, and [endometriosis](#) in general, are linked with reduced fertility and infertility. It's thought that endometriomas damage the inside of the ovaries as they grow. Unfortunately, surgical removal of endometriomas doesn't improve fertility rates, and can cause further loss of ovarian tissue.

Polycystic ovarian syndrome (PCOS) is associated with fertility problems. See the [polycystic ovarian syndrome](#) leaflet for more detail.

However, having polycystic ovaries without PCOS doesn't seem to be linked with fertility problems.

Further reading

- [Ovarian cancer - the recognition and initial management of ovarian cancer](#); NICE Clinical Guideline (April 2011 - last updated October 2023)
- [Management of Suspected Ovarian Masses in Premenopausal Women](#); Royal College of Obstetricians and Gynaecologists (December 2011)
- [Smorgick N, Maymon R](#); Assessment of adnexal masses using ultrasound: a practical review. *Int J Womens Health*. 2014 Sep 23;6:857-63. doi: 10.2147/IJWH.S47075. eCollection 2014.
- [Grimes DA, Jones LB, Lopez LM, et al](#); Oral contraceptives for functional ovarian cysts. *Cochrane Database Syst Rev*. 2014 Apr 29;4:CD006134. doi: 10.1002/14651858.CD006134.pub5.
- [The Management of Ovarian Cysts in Postmenopausal Women](#); Royal College of Obstetricians and Gynaecologists (2016)
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