Mersey and West Lancashire
Teaching Hospitals
NHS Trust

Ovarian cyst

(includes treatment and ovarian cystectomy)

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إذا احتجت إلى هذه النشرة بلغة أُخرى، أو بتنسيق
يسهل الوصول إليه، يرجى التحدث إلى أحد الموظفين لترتيب ذلك لك.

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This leaflet is for patients who have ovarian cysts. It contains information about what they are, how they can affect you and what treatments are available including surgery to remove them.

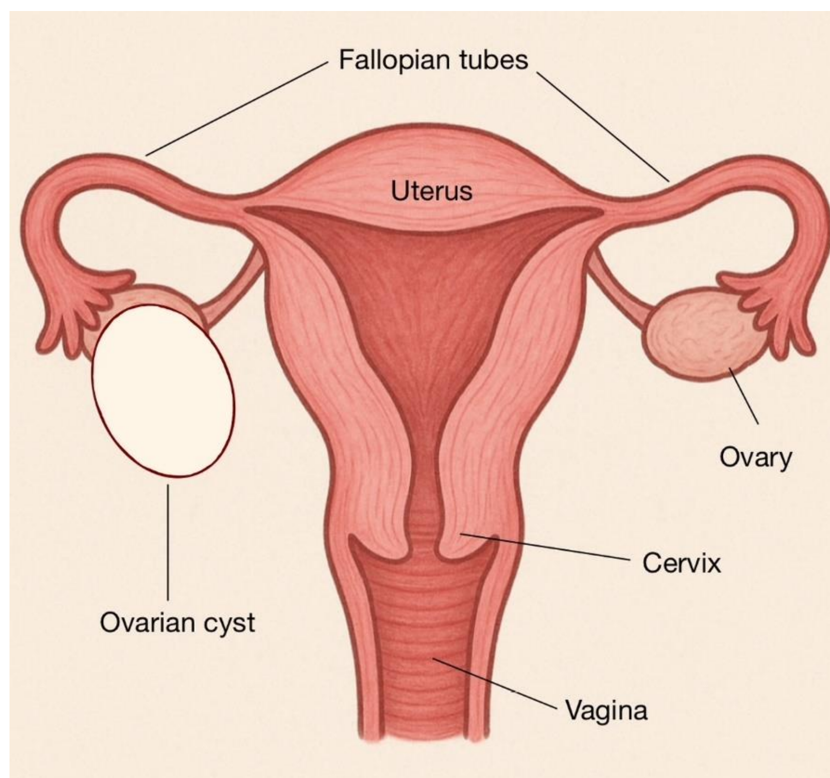
What are the ovaries?

The ovaries are two small, oval shaped organs located on either side of the uterus in the female pelvis. They are a vital part of the female reproductive system and have two main functions. The ovaries produce eggs for fertilisation; each month one of the ovaries typically releases an egg in a process called ovulation. They also secrete the hormones oestrogen and progesterone, which regulate the menstrual cycle and support pregnancy.

What is an ovarian cyst?

An ovarian cyst is a fluid-filled sac that develops either on the surface or within an ovary. They are very common and many women will have an ovarian cyst at some point in their life. Around 10% of women will require surgery for an ovarian cyst. They occur at any age, although they are most frequent during a woman's reproductive years. Most ovarian cysts are harmless and usually resolve on their own without treatment. However, some can grow larger, cause symptoms, or become problematic, requiring further evaluation or surgical removal.

The below image shows the pelvic organs and a cyst arising from the ovary



Types of ovarian cysts

There are many different types of ovarian cysts, the most common ones include:

- Functional or physiological cysts: These are the most common type of cysts and are usually harmless. They naturally form as part of the menstrual cycle. There are 2 types:
    - Follicular cysts are simple cysts filled with clear fluid. Follicular cysts are formed as a natural part of the ovulation cycle. They can sometimes persist if the egg does not get released during ovulation or the follicular cyst fails to shed its fluid. They usually resolve on their own over 4-6 weeks and can often be left alone without any treatment.
    - Luteal cysts are natural cysts that form within the ovary after ovulation from an area known as the 'corpus luteum.' They are less common than follicular cysts. They form once the egg has been released and an area on the ovary known as the corpus luteum fills with fluid instead of shrinking down. Sometimes they can become haemorrhagic in nature, if there is bleeding into the cyst. This can cause pain but will usually settle on its own with time. Usually, luteal cysts will shrink and completely resolve over 2-3 months.
- Dermoid cysts also known as teratomas: Cysts which develop from the cells that create eggs. Dermoid cysts are more solid and complex in nature. They may contain a wide range of tissue including blood, fat, bone and hair.
- Cystadenomas: Cysts that develop from the outer part of the ovary. There are two main types including serous (filled with watery fluid) or mucinous (filled with mucous like fluid). They are usually more complex in nature and may have multiple compartments.
- Endometriomas: These cysts are associated with endometriosis. They contain thick, dark blood and are often called 'chocolate cysts'. They are often associated with other areas of endometriosis on and around the pelvic organs.

Most ovarian cysts are benign (non-cancerous), but some may become cancerous or borderline (pre-cancerous). Ovarian cancer is rare in women before menopause. If the cyst appears suspicious in nature, surgery is required to remove it for further analysis. Your doctor will be able to advise on the type of cyst you have and the best treatment option for you.

What are the symptoms of an ovarian cyst?

Many ovarian cysts cause no symptoms and are often discovered incidentally during a routine pelvic exam or ultrasound. However, when symptoms do occur, they can include:

- Pelvic pain or discomfort
- Bloating or abdominal swelling
- Pain during intercourse
- Irregular or heavy menstrual periods
- Frequent urination, or difficulty emptying the bladder completely
- Difficulty opening your bowels
- Indigestion or feeling full

Less commonly, a cyst may undergo a type of complication, resulting in severe symptoms which may require hospital admission. This includes:

- Ovarian torsion: If the cyst becomes enlarged, it may become twisted which blocks off the blood supply to the ovary. This causes severe pain and is a medical emergency. Admission to hospital is required for surgery. If left untreated, the ovary may become deprived of blood supply and will not be able to survive or function normally.

- Ovarian rupture: As the cyst grows, it may burst which results in severe and sudden pain. If there is bleeding from the ovary, there could be internal haemorrhage also. Admission to hospital is required for observation and surgery is sometimes required.

How are ovarian cysts diagnosed?

Ovarian cysts often cause no symptoms and may therefore be diagnosed incidentally, for example during a scan for an unrelated reason.

If you have symptoms suggestive of an ovarian cyst your doctor will take a medical history of your symptoms and may perform an abdominal/pelvic exam to feel for any abnormalities in the ovaries.

To confirm the presence of an ovarian cyst and assess the type/nature of it, you may be offered the following tests:

- Ultrasound scan: This is the most common imaging method used to view the cyst and determine its size, location, and characteristics. It is usually performed transvaginally by placing a thin probe into the vagina as this gives the best views of the ovaries. It can also be performed transabdominally where the probe is placed on your tummy instead.

- Blood tests: You may be referred for a test called CA-125 which is a protein marker in the blood. CA-125 can be helpful to help to determine the type of cyst and decide the most appropriate treatment. If CA-125 levels are normal, it is likely to be a reassuring sign that the cyst is benign. CA-125 can be raised in cases of ovarian cancer. However, it is often raised in many benign conditions that cause inflammation within the abdomen and pelvis such as endometriosis as well as many other conditions affecting the bowel, gallbladder and liver. It can also be raised around the time of ovulation and menstruation. Therefore, a raised CA-125 level does not mean that the cyst must be cancerous.

- MRI or CT scan: These additional imaging tests may be recommended to provide further information about the cyst.

Treatment for ovarian cysts

Treatment depends on several factors including the size and type of cyst, whether you have any symptoms and your age or menopausal status. The options include:

Surveillance

For cysts that are relatively small, appear benign in nature and are not causing symptoms, observation with repeated ultrasound scan is recommended. The ultrasound scan will track any changes in the size or nature of the cyst. Many cysts resolve on their own and no further treatment is required. If repeated scans show that the cyst is increasing or changing in nature, your doctor may offer you surgery.

Surgery

An operation to remove the cyst, may be recommended if the cyst:

- Causes pain or other symptoms
- Is large or increasing in size (7cm or more)
- Persists over time without resolving
- Appears suspicious in nature on scans
- Is associated with complications such as torsion or rupture

The goal of the surgery is to relieve symptoms, prevent complications, and determine the nature of the cyst.

What surgery will I be offered?

The type of surgery will depend on your individual circumstances.

Most commonly, removal of a cyst is performed through an operation called ovarian cystectomy. This involves removal of the cyst from the ovary whilst preserving the ovary itself. During the procedure, the surgeon will remove the cyst whilst trying to preserve as much healthy ovarian tissue as possible to maintain ovarian function. This is especially important for women who are premenopausal and/or desire future fertility. In most cases, ovarian function and fertility are preserved following an ovarian cystectomy. However, the extent of the surgery and the nature of the cyst can affect the outcome. If fertility is a concern, discuss this with your doctor before the procedure.

Your gynaecologist may recommend that you have the whole ovary removed (oophorectomy) along with the cyst. This is often the case for women who are already postmenopausal and have high risk factors for ovarian cancer or when the cyst appears suspicious in nature. In such cases, you may be advised to have both ovaries and fallopian tubes removed (salpingo-oophorectomy) to prevent future ovarian cancer. Sometimes, it is advisable to also have the uterus and cervix removed (hysterectomy). Your gynaecologist will discuss these procedures with you, explaining the benefits and risks, and advise which procedure is best for your situation.

How is the procedure performed?

Removal of the cyst is typically done under general anaesthesia (whilst you are asleep) using one of the following methods:

- Laparoscopic surgery (keyhole approach): This is the most common method for removing ovarian cysts. It involves small incisions in the abdomen through which a camera and surgical instruments are inserted. This method is preferred for smaller cysts and has a faster recovery time, less pain and smaller scars. It is usually performed as a day case operation.

- Laparotomy (open surgery): Involves an open cut on the abdomen and is used for larger cysts, complicated cases or when the nature of the cyst is suspicious. The cut may be horizontal, across the bikini line or vertical (between the belly button and pubic bone). This approach involves a longer recovery time and requires an overnight stay in hospital.

Your doctor will discuss the most appropriate option based on your individual situation.

Risks and complications

As with any surgery, there are some risks associated with ovarian cyst removal. Your surgeon will discuss these risks with you before the procedure:

- Bleeding (with a small possibility of requiring a blood transfusion)
- Infection
- Anaesthetic related complications
- Damage to pelvic organs (e.g. bowel, bladder, ureters, blood vessels or nerves)
- Formation of scar tissue around the pelvic organs (adhesions)
- Clots on the legs (deep vein thrombosis) and lungs (pulmonary embolus)
- Risk of recurrence of cysts
- Reduced ovarian reserve or fertility (especially if large portions of the ovary are affected by removal of the cyst)
- Early menopause
- Risk of oophorectomy (removal of ovary) and/or salpingectomy (removal of fallopian tube)

What to expect before surgery?

Before surgery, you will be given an appointment for the pre-operative clinic to assess your fitness to undergo surgery and general anaesthesia. You will be asked about your current health status, medications that you may be taking and any other relevant background information. We will carry out all investigations required i.e. blood tests, ECG (heart trace) and a chest x-ray.

In the gynaecology clinic, you will have the opportunity to ask questions and once you are certain about your decision, you will be asked to sign a consent form for the operation.

You will be asked to avoid eating or drinking for a minimum of 6 hours before your surgery and you may be asked to stop certain medications.

What to expect after surgery

After surgery, you will be initially monitored in the theatre recovery room as you wake from anaesthesia. You will be given analgesia to keep your pain controlled. Once you are awake from the general anaesthetic, you will be transferred to the ward where you will be observed for several hours. We will make sure you have passed urine and are feeling well in yourself. You will be offered a drink and something light to eat. The wounds are usually closed with stitches which will dissolve. If you have a

larger cut, you may have surgical clips which need to be removed 5-7 days after surgery – the nursing staff will inform you if this is required.

If you have had laparoscopic surgery, you will normally be discharged the same day, you will need to have a responsible person to take you home and be with you for 24 hours. If you have had an open operation (laparotomy) you will need to stay in hospital overnight and will be discharged usually within 1-2 days. Upon discharge, we can provide you with stronger pain medications to take home, if required and a sickness certificate for time off work. You will be given more information about what to expect after surgery and wound care advice before you go home.

Recovery after surgery

Recovery time varies depending on the surgical method:

- Laparoscopic surgery: Most patients can resume normal activities within 1–2 weeks and return to work after 2 weeks.

- Laparotomy: Recovery may take longer, approximately 4 weeks due to the larger incision.

After surgery, it is normal to experience some pain and discomfort around the incision sites, which can usually be managed with over-the-counter pain medications such as paracetamol and ibuprofen. You may need to take the stronger pain killers (e.g. codeine or tramadol) provided by the hospital in the first few days. You may also feel tired or have mild abdominal bloating for several days. It is important to rest but also to gradually increase your activity as tolerated to aid recovery.

The anaesthetic effects are very short lasting, but you may feel more sleepy than normal for the first 24-hours and during this time, your judgement may be impaired. You should avoid heavy lifting and strenuous exercise for several weeks, especially after open surgery. Surgical dressings can be removed 24 hours after the operation. Keep the surgical wounds clean and dry, and watch for signs of infection such as redness, swelling or discharge. You may experience some vaginal bleeding which may last several days after the surgery and is usually lighter than a menstrual period If you experience severe pain, fever, heavy bleeding or difficulty urinating, contact your GP or get in touch with the gynaecology team promptly.

Follow-up and results

After surgery, the removed cyst will be sent to the laboratory for histological examination to confirm the diagnosis. Your results will be sent to you by letter in the post. Alternatively, a follow up appointment may be scheduled, if required, to discuss the results. If the cyst is benign, no further treatment may be necessary. If the cyst is borderline or cancerous, further evaluation and treatment may be required and this will be discussed with you further.

Where can I find more information?

- NHS – Ovarian Cysts www.nhs.uk/conditions/ovarian-cyst
- Royal College of Obstetricians and Gynaecologists
- Ovarian cysts leaflet www.rcog.org.uk/en/patients/patient-leaflets/ovarian-cysts-before-the-menopause
- Recovering after laparoscopy leaflet https://www.rcog.org.uk/for-the-public/browse-our-patient-information/laparoscopy-recovering-well/

Contact Information

Whiston and St Helens hospitals

Gynaecology secretaries
Womens Offices, Whiston Hospital
Tel no. 0151 676 5289
Gynae.secs@merseywestlancs.nhs.uk

Gynaecology ward (3E)
Level 3, Whiston Hospital
Tel no: 0151 430 1522

Southport and Ormskirk hospitals

Gynaecology secretaries
Tel no. 01695 656658

Gynae assessment bay (E ward)
Tel no. 01695 656901

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Town Lane, Kew
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