

Patient information factsheet

Robotic gynaecological surgery

We have written this factsheet to provide you with information about robotic gynaecological surgery. It explains what robotic surgery is, what it involves, and what the possible advantages and risks are. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please speak to a member of your healthcare team.

What is gynaecological surgery?

Gynaecological surgery includes any surgical procedure that involves the organs and structure of the female pelvic region: the uterus (womb), ovaries, cervix, fallopian tubes, vagina and vulva.

There are many reasons why gynaecological surgery may be required.

These include treatment of conditions such as:

- endometriosis (a long-term condition in which tissue similar to the lining of the uterus grows in other places such as the ovaries and fallopian tubes)
- fibroids (benign tumours)
- ovarian cysts
- cancer
- chronic pelvic pain
- pelvic inflammatory disease (PID)
- uterine prolapse (when the muscles and tissue in your pelvis weaken, causing your uterus to drop down into your vagina)
- heavy menstrual bleeding

Gynaecological surgery can be performed in one of three ways:

Open surgery

During open surgery, the surgeon makes one large incision (cut) in the abdomen (tummy). This allows the surgeon to see the tissues and structures in the body so that they can perform the procedure. After the procedure, the incision is closed using stitches and a dressing is applied.

Laparoscopic (keyhole) surgery

Laparoscopic surgery is a minimally invasive surgical procedure. During laparoscopic surgery, the surgeon usually makes four small incisions in the abdomen. These allow the surgeon to insert an instrument called a laparoscope (a thin metal tube that has a light source and a camera at the end, which relays images of the inside of the abdomen to a television monitor).

Small surgical instruments held by the surgeon are inserted into the abdomen to perform the operation. Carbon dioxide gas is used to inflate the abdomen to create space to allow the surgeon to see and operate. After the procedure, the gas is let out of the abdomen, the incisions are closed using stitches and a dressing is applied.

Robotic surgery

Robotic surgery is a new type of minimally invasive surgery which uses computer-assisted technology to help surgeons control and navigate their surgical tools. This approach can offer many benefits over traditional procedures, including quicker recovery times and lower complication rates.

Robotic surgery has become more common over the last few years, especially in North America, Europe and now the UK. This type of surgery is currently being introduced into the gynaecology department at University Hospital Southampton, where our surgeons are receiving training and will be performing procedures under the mentorship of surgeons with expert robotic surgery experience.

During robotic surgery, the surgeon makes small incisions in the abdomen (similar to a laparoscopic operation). However, instead of the surgeon holding the laparoscope and surgical instruments, a robotic platform with robotic 'arms' holds and moves them. The surgeon controls the robot using a console in the operating theatre.

The operations are performed under general anaesthetic (medicine to make you go to sleep), so you will be asleep and won't feel any pain during the procedure.

What advantages does robotic surgery have over other types of surgery?

The advantages of laparoscopic and robotic surgery over open surgery include:

- a shorter stay in hospital
- a faster recovery time
- less post-operative pain
- fewer complications from the surgery itself, such as incisional hernias (where tissue pokes through a surgical wound in your tummy that has not fully healed) and adhesions (bands of tissue that join together normally separated internal organs, which can form following abdominal or pelvic surgery)
- earlier return to activity or work
- earlier access to post-operative treatments (such as chemotherapy, for those patients receiving treatment for cancer)

Additional advantages of robotic surgery over laparoscopic surgery include:

- higher chance of going home the same day as your surgery
- the robotic instruments enable better movement in many directions and can get to small, difficult-to-reach areas of the body (such as low down in the pelvis)
- the robotic instruments are easier to control when doing very fine, precise work, reducing the risk of human error)

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Are there any risks with robotic surgery?

The risks of robotic surgery are largely the same as those of laparoscopic surgery and include:

- infection, either in the wound or inside the abdomen
- minor bleeding and bruising around the incision or a collection of blood in the pelvis (haematoma)
- damage to other structures inside the body (such as the bowel, bladder, ureters, blood vessels)
- conversion to open surgery (a larger incision will need to be made) if the procedure becomes too difficult or complications occur
- clots in your legs or lungs

However, there are also some specific risks associated with robotic surgery. These are rare and include:

- failure of the robot (this is very unlikely). If that happens then the surgeon would convert to a laparoscopic or open procedure
- a traction (pulling) injury to a structure inside the body such as the bowel (this would be repaired at the same time)
- major bleeding (in the unlikely event of this happening, the surgeon may need to complete the procedure in the traditional way, via open surgery)

Contact us

If you have any questions or concerns, please contact your clinical team. You will have been given their contact details during your first clinic appointment.

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