

Patient information

Diagnostic Laparoscopy - Key-hole Surgery

General Surgery Department

What is a laparoscope?

A laparoscope is a small telescopic lens and video camera mounted on the end of a catheter that surgeons insert into the abdominal cavity under general anaesthetic to inspect the content of the abdomen.

What is a diagnostic laparoscopy?

A diagnostic laparoscopy is a key-hole procedure that allows a surgeon to look directly at the contents of a patient's abdomen and pelvis, i.e. it is a minimal invasive surgical procedure performed for diagnostic purpose.

Alternative names for a diagnostic laparoscopy are as follows: laparoscopy, exploratory laparoscopy, key-hole diagnostic surgery, and key-hole surgery.

It is done when other diagnostic tests are not informative, cannot be informative, or cannot be used.

For instance: a diagnostic emergency laparoscopy is the most reliable method for diagnosis of appendicitis, bleeding from the ovary, or ruptured small ovarian cyst.

It is important to tell the patient that a diagnostic laparoscopy may be converted into the definitive surgery, either key-hole or open, if any therapeutic procedure is needed to perform.

There is a variety of curative laparoscopic procedures. Examples are:

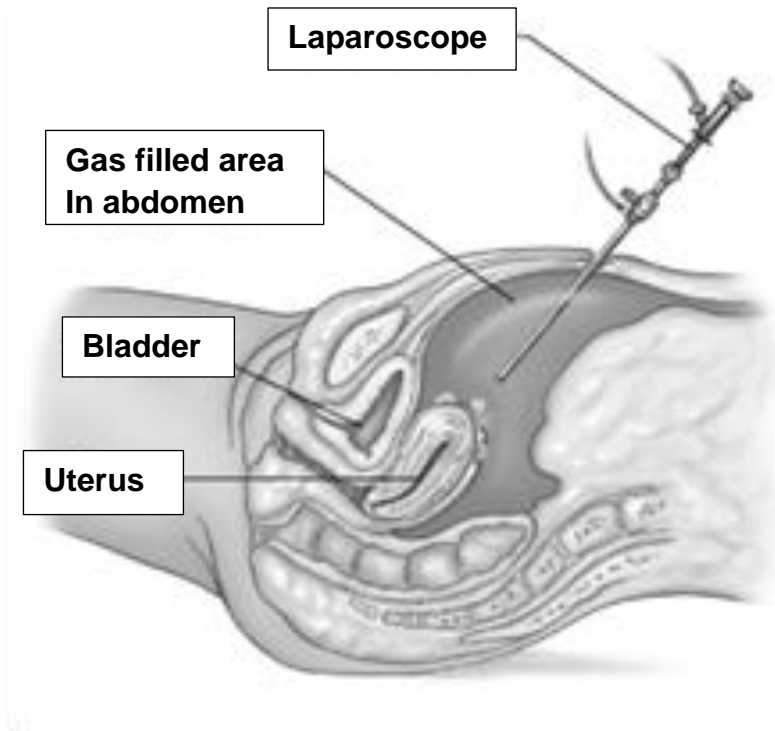
- appendectomy,
- washout of abdominal cavity,
- removal of ovarian cyst, control of a bleeding ovarian vessel,
- removal of fallopian tube,
- removal of gallbladder,
- adhesiolysis,
- perforated duodenal ulcer repair, and many others.

How a diagnostic laparoscopy is performed?

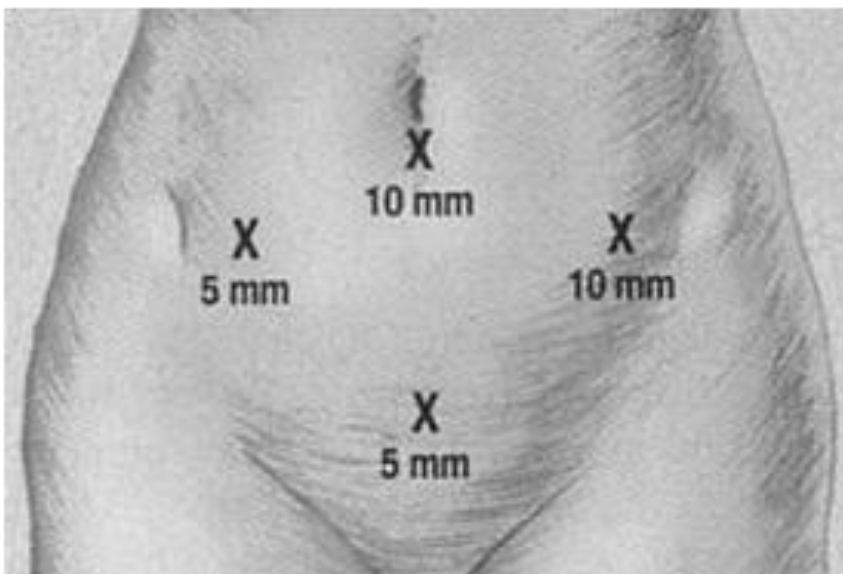
- Starving for six hours prior to the procedure.
- Only small amounts of water up to two hours before.
- The procedure is performed under a general anaesthetic.

A surgeon makes a small cut below the belly button (navel) and inserts a port (tube) into the tummy cavity. Carbon dioxide gas is passed into the abdomen to expand the cavity.

A laparoscope goes through the port below the belly button (picture below).



More small cuts may be made if other instruments are needed to get a better view of organs (picture below).



Sampling of peritoneal fluid for bacteriological, cytological, morphological and biochemical tests is often done for accurate diagnosis.

Biopsy of non-healthy areas of the abdominal cavity is an action for patients if a cancer is suspected.

Definitive procedure may follow a diagnostic laparoscopy.

After the laparoscopy, the gas (CO₂), laparoscope, and instruments are removed, and the cuts are closed. Wounds are covered with steri-strips and dressings.

The operation usually takes between half an hour and an hour or even more, if it becomes a therapeutic laparoscopy.

What are the benefits of diagnostic laparoscopy

- To confirm the diagnosis
- To treat the patient with particular illness or injury

What are the complications of a diagnostic laparoscopy?

Most people will not experience any postoperative complications.

Some discomfort around tummy button or around the cut in right side of the abdomen is normal.

The risks are for:

1. Complications from anaesthesia
2. General complications of any surgery
3. Complications of a diagnostic laparoscopy
4. Complications from anaesthesia

Anaesthetist will discuss them with the patient.

2. General complications of any surgery

There are intraoperative and postoperative complications. Intraoperative complications mean complications during the surgery.

Postoperative complications mean complications after the surgery.

Following intraoperative complications may occur:

- Bleeding
- Injury to internal organs (bowel, bladder, ovary, fallopian tube, ureter)

Postoperative complications include:

- Bleeding or collection of blood

- Infection of wound, tummy, or chest
- Blood clots in the veins of legs (deep vein thrombosis / DVT) or lungs (a pulmonary embolism / PE)
- Bowel blockage due to internal scarring (adhesions)
- Hernia in the area of the cut / scar

3. Complications of a diagnostic laparoscopy

- Spreading of gas within the tissues of abdominal wall (common) that would cause a crackling sensation in the skin due to trapped gas; it settles quickly and is not serious.
- Spreading of gas (carbon dioxide) into the chest (very rare) that would cause a compression of the lung. Can be treated by insertion of chest drain.
- Spreading of gas into the vessels of the lungs (gas embolism) (very rare)
- Injury to internal organs (bowel, bladder, ovary, fallopian tube, ureter).
- For instance, it can occur when placing instruments into the tummy (risk is 1:1000). However, the risk is higher in patients who have previously had surgery.
- If an injury to the bowel happens, a longer cut and open surgery would be the best option for most of the cases.
- A risk of bleeding from the abdominal wall.
- A risk of port site complications (blood seroma within the wound, infection, and hernia).
- A risk of failure of an attempted diagnostic laparoscopy.

If a diagnostic laparoscopy would be transformed into a therapeutic procedure, the risks would depend on specific procedure e.g. removal of appendix.

What are the estimated risks for complications?

Laparoscopic surgery is very common and generally regarded as safe. If all diagnostic laparoscopy complications would be stratified just in two groups – minor and serious complications – the risk for them would be as follows:

- minor complications occur in one or two out of every 100 cases,
- serious complications occur in one out of every 1,000 cases.

Three most common minor complications are:

1. Post-operative infection,
2. Minor bleeding & bruising around the incision.
3. Feeling sick and vomiting

Five most common major complications are:

1. Damage to an organ, such as your bowel or bladder, which could result in the loss of organ function
2. Damage to a major artery resulting in bleeding.
3. Complications arising from the use of carbon dioxide during the procedure, such as the gas bubbles entering your veins or arteries.
4. A serious allergic reaction to the general anaesthetic
5. A blood clot developing in a vein, usually in one of the legs (DVT).

Are there any alternatives to a diagnostic laparoscopy?

For majority of patients, there are no alternatives.

What to expect after the operation

Discharge

The patient is usually either kept in hospital for about 12-24 hrs after a diagnostic laparoscopy.

Scars after a diagnostic laparoscopy

You'll have one, two, or three small cuts at different points on your abdomen. Each one will be small (one –two cm).

These small wounds may be closed in various ways, including dissolvable stitches or skin glue. These cuts will leave small scars on the abdomen.

Stitches

If you have stitches or skin staplers which need to be removed, this can usually be done by the practice nurse at your GP surgery, Seven days after your operation.

A doctor will give you advice about how your wound was closed and how to care for them.

Dressings

You do not need to keep the scars covered after a diagnostic laparoscopy, though some people find it more comfortable to do so.

You do not need to worry about getting the scar wet. Many patients have concerns that standing up straight will pull at the stitches. Don't worry about this.

Getting out of bed and standing up straight will actually help you to recover more quickly.

Discomfort

You will experience pain and discomfort around the scars (scar), especially for the first few days.

Painkillers

Painkillers will be prescribed for you for about Five days. They may well cause constipation, so it's important to get plenty of fibre in your diet while you are recovering.

Fresh fruit and vegetables will help to keep your bowels moving regularly.

Getting back to work

In most cases it's usually safe to return to work Three days after a diagnostic laparoscopy. as a diagnostic laparoscopy is relatively minor surgical procedure.

However, people whose work involves a lot of heavy lifting, or standing up or walking for long periods of time, will not be able to

return to work as quickly as those who have office jobs.

Driving

It is advisable not to restart driving for about 24 hours after a diagnostic laparoscopy. Before resuming driving, you should be free from the sedative effects of any painkillers you may be taking.

You should be comfortable in the driving position and able to safely control your car, including freely performing an emergency stop.

When do I have to contact doctor if I have concerns or questions?

Call your doctor if you have:

- Increased or persistent pain not relieved with pain relief medications.
- Redness or swelling around the wound.
- Discharge of pus or blood from the wound.
- Increased pain in the abdomen.
- Persistent fever.
- Temperature above 38C.
- Shakes, swelling, chills, rigors.
- Uncontrolled vomiting.
- Persistent bloating of the stomach.
- Inability to have a bowel movement after four days.
- Dizziness/feelings of faintness.
- Blood in your vomit, urine, or cough

Who do I contact if I have questions or concerns?

A. Contacting during working hours (9am - 5pm in the working week)

Please contact the secretary and leave a message for the surgical team.

You will be contacted with appropriate advice or management plan.

Further information

If you think that your condition is serious then it is best to come straight to Aintree Accident & Emergency department*, which can manage serious problems in the best possible manner.

B. Out of hours (after 5pm during working week/weekend/bank holiday)

Please seek advice from your GP for minor complications.

If you are not sure or if you think it is a serious problem, please come to Aintree Accident & Emergency department* for a review.

Hospital switch board

Tel: 0151 529 5980.

*When you come to the hospital please bring this and any other relevant discharge documents that you may have been given at the time of discharge to help the A&E doctors to decide your management.

Are there any other sources of information?

Here is a list of websites that offer safe, sensible, useful information:

<http://www.nhs.uk/Conditions/Laparoscopy/Pages/how-it-is-performed.aspx>

<http://www.nhs.uk/conditions/Laparoscopy/Pages/Introduction.aspx>

<http://www.ouh.nhs.uk/patient-guide/leaflets/files%5C110404laparoscopy.pdf>

<http://www.cmft.nhs.uk/media/450031/99%2012%20major%20laparoscopy%20and%20possible%20laparotomy.pdf>

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

For further information please contact:

Aintree Hospital

Tel: 0151 525 5980

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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