The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

LAPAROSCOPY

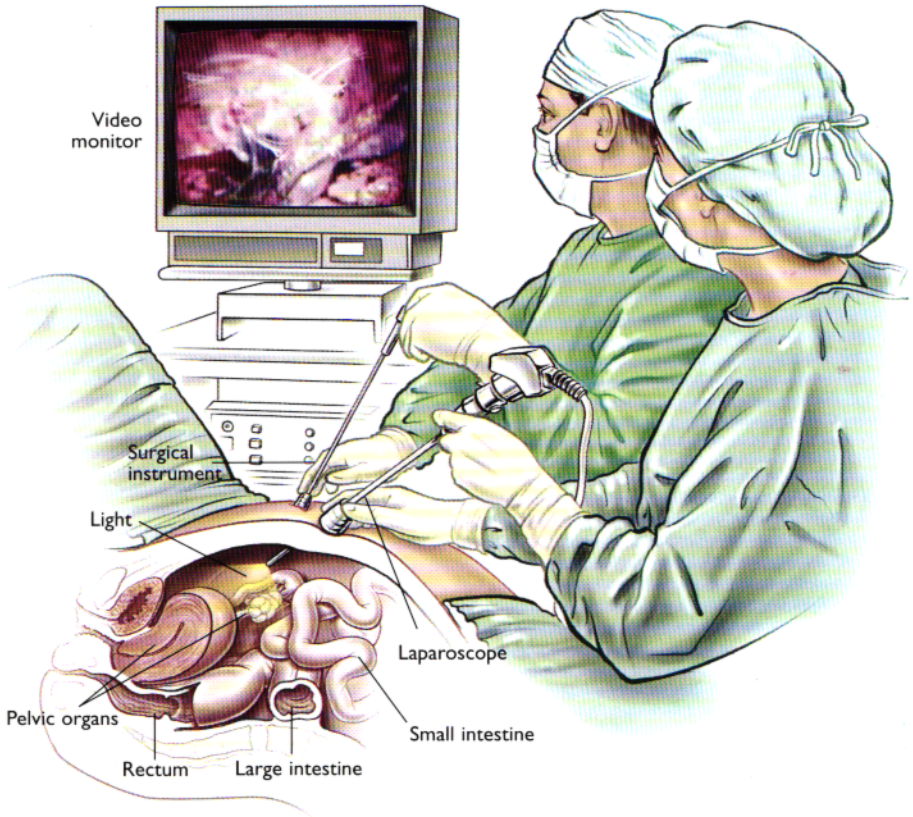
A guide for women

Laparoscopy is a procedure that allows a surgeon to look at the organs inside the patient's abdomen and pelvis. A slender tube called a laparoscope is inserted into the patient's abdomen through a small incision, as shown in the illustration.

The laparoscope is fitted with a light and video camera. Images of abdominal and pelvic organs are displayed on a video monitor. The procedure may be recorded, and photographs may be taken.

Laparoscopy is also known as minimal access surgery, keyhole surgery or endoscopy. In many cases, it can replace the need for open surgery, which involves a single larger incision (cut) in the abdomen.

Diagnostic laparoscopy can be used to investigate the cause of symptoms such as pelvic pain, period problems or infertility. The doctor inspects the outside of the uterus, fallopian tubes, ovaries and surrounding organs (such as the bladder, ureters, small intestine and large intestine) for abnormalities and signs of disease.



Laparoscopy allows the doctor to see the patient's abdominal and pelvic organs. The laparoscope is inserted through a small incision in the abdomen. Surgical instruments may be inserted through additional incisions.

During laparoscopy, the surgeon can treat some conditions. This is called operative laparoscopy. Using additional incisions, the surgeon can insert specialised surgical instruments into the abdomen. Operative laparoscopy may be used to treat:

- an ovarian cyst, an abnormal sac of fluid in an ovary
- endometriosis, the growth of endometrial tissue outside the uterus. The endometrium is the tissue layer that lines the inside of the uterus. (See the two College pamphlets *Understanding endometriosis* and *Laparoscopic treatment of endometriosis*, available from your gynaecologist.)
- certain types of uterine fibroids
- blocked fallopian tubes, which can cause infertility
- an abscess, a pocket of pus within the pelvic cavity caused by a pelvic infection
- pelvic inflammatory disease (PID), an infection of the fallopian tubes, ovaries or uterus that can cause complications such as fertility problems
- ectopic pregnancy, a pregnancy that develops outside of the uterus, usually in one of the fallopian tubes
- some types of bladder problems
- prolapse of the uterus or bladder
- urinary incontinence
- adhesions, bands of scar tissue that may need to be cut or divided because they are suspected of causing pain, infertility or other symptoms.

Operative laparoscopy may also be used to:

- perform tubal sterilisation
- perform some types of hysterectomy
- take biopsies
- remove an intra-uterine device (IUD) that has punctured the uterus.

Dear Doctor: When you discuss this pamphlet with your patient, remove this sticker and put it on the patient's medical history or card. This will remind you and the patient that this pamphlet has been provided. Some doctors ask their patients to sign the sticker to confirm receipt of the pamphlet.

Edition number: 2

Talk to your Gynaecologist

The aim of this pamphlet is to provide you with general information. It is not a substitute for advice from your doctor and does not contain all the known facts on laparoscopy or its risks, benefits and limitations.

Some medical terms in this pamphlet may need further explanation by your doctor. Your doctor will be pleased to answer questions. It may be helpful to make a list of questions you wish to ask.

If you have any concerns about the procedure, discuss them with your doctor. Your surgeon cannot guarantee that the surgery will meet all your expectations or that the surgery has no risks.

We encourage you to seek the opinion of another doctor if you are uncertain about the advice you are given. Use this pamphlet only in consultation with your doctor.

Consent form: If you need to have surgical treatment, the doctor will ask you to sign a consent form. Read it carefully. If you have any questions about the consent form, surgery, risks or anything else, ask the doctor.

YOUR COMPLETE MEDICAL HISTORY

Tell the doctor your full medical history because prior illness or surgery may interfere with the procedure, anaesthesia or your recovery. This information is confidential.

Tell the doctor if you are, could be, or plan to become pregnant, or if you are taking any hormone treatments such as hormone therapy (HT) or the oral contraceptive pill.

Tell your doctor about all medicines you are currently taking or have recently taken including prescription drugs, over-the-counter medicines, herbal remedies, and long-term treatments such as blood thinners, aspirin (including that contained in cough syrups), arthritis medication or insulin. It may be helpful to write a list.

Your doctor may ask you to stop taking some medications before the procedure, or give you an alternate dose.

ADDITIONAL TESTS FOR PATIENTS AT INCREASED RISK

You may need a range of tests to make sure you are fit for laparoscopy or open surgery (laparotomy).

If you have already been diagnosed with a heart condition, or if the doctor thinks you may have an underlying heart condition, you may need to see a cardiologist (heart specialist) and an anaesthetist.

Patients with known or suspected heart or lung problems usually need a chest X-ray examination.

Patients with heart disease, or conditions that increase the risk of heart disease (such as high blood pressure or diabetes) may need an electrocardiogram (ECG), which indicates the heart's health. Women older than 50 have a higher risk of heart disease and may need an ECG regardless of their medical history.

The doctor will take your medical condition into account when planning the laparoscopy. Different surgical techniques may be needed to reduce your risk of complications.

BEFORE SURGERY

Depending on the diagnosis, some women may need a kidney ultrasound, pelvic ultrasound, urodynamic studies, a barium enema, or an intravenous pyelogram (an X-ray examination of the kidneys which indicates their function). These tests help the doctor to plan the best treatment approach.

The doctor may perform other tests to check for any undiagnosed diseases that may interfere with the success of the surgery or your recovery. For example, urine tests can detect a urinary tract infection or certain diseases such as diabetes.

You may be given medications to take before the laparoscopy, such as hormones or antibiotics. These medications will help to reduce the risk of some complications during and after the laparoscopy.

Your doctor will give you detailed preoperative instructions about fasting and other issues. Follow these instructions carefully.

Once you are booked into hospital, you may have an intravenous line inserted into your hand or arm. Depending on your diagnosis and medical history, you may be given a pair of "pneumatic compression stockings" to wear. These stockings reduce the risk of blood clots forming in the legs. You may also be given drugs that stop blood clots from forming.

At the beginning of the operation, a bladder catheter may be inserted to drain urine.

Making a decision: The decision whether to undergo a laparoscopy is always yours and should not be made in a rush. Make a decision only when you are satisfied with the information you have received and believe you have been well informed.

ANAESTHESIA

Laparoscopy is usually performed under general anaesthesia.

You may be given a sedative before the anaesthetic to help you relax.

Modern anaesthetic drugs are safe with few risks. Rarely, side effects from anaesthetic can be life threatening.

Tell your doctor and anaesthetist if you have ever had a reaction to an anaesthetic drug or if you are allergic to antibiotics or other medicines.

Interpreter Service

If you have trouble reading English, telephone the translating and interpreting service. Australia: Translating and Interpreting Service (T.I.S.) 13 14 50 (national number). New Zealand: Interpreting and Translation Services 09 276 0014 (Auckland).

ITALIAN
Se avete difficoltà nel leggere in inglese, telefonate al servizio interpreti e traduttori. Australia:13 14 50 Nuova Zelanda: 09 276 0014

SAMOAN
Afai e faaletonu lau faitau i le Gagana Peretania, telefoni le tautua faaliliu ma faamatala upu. Ausetalia 13 14 50 Niu Sila 09 276 0014

TURKISH
İngilizce okumakta zorluk çekiyorsanız, tercümanlık servisini arayınız. Avustralya: 13 14 50 Yeni Zelanda: 09 276 0014

GREEK
Αν δυσκολεύεστε να διαβάσετε αγγλικά, τηλεφωνήστε στην υπηρεσία διερμηνέων μεταφραστών. Αυστραλία: 13 14 50 Νέα Ζηλανδία: 09 276 0014

TONGAN
Kapau 'oku 'ikai ke mahino ho'o lau he lea fakapapalangi, telefoni ki he kautaha liliulea mo fakatonulea. 'Aositelelia: 13 14 50 Nu'usila: 09 276 0014

ARABIC
إذا وجدتم صعوبة في قراءة الإنجليزية اتصلوا بخدمة الترجمة الخطية والشفوية على الرقم 13 14 50 في استراليا و 09 276 0014 في نيوزيلاندا

MAORI
Mehe rarureru ana koe ki te riiti i nga korero-pukapuka i roto i te reo Paakeha, me waea atu koe ki te tari kai whakamaori i nga kupu korero pukapuka me te reo, Te naama hei waea - tangaatu mou i Ahitreiria (Australia) ko: 13 14 50. Te naama waea i Aotearoa (New Zealand) ko: 09 276 0014.

CHINESE
如果您閱讀英語有困難，請致電口筆譯服務處。澳大利亞： 13 14 50 新西蘭： 09 276 0014

VIETNAMESE
Nếu quý vị gặp khó khăn khi đọc tiếng Anh, điện thoại cho dịch vụ thông ngôn và phiên dịch. Tại Úc: 13 14 50 tại Tân tây lan: 09 276 0014.

THE LAPAROSCOPY PROCEDURE

The woman is positioned on her back. The first small incision is usually made through or near the navel. In many cases, a needle is inserted into the abdomen through the incision so that carbon dioxide gas can be passed into the abdominal cavity. This lifts the abdominal wall clear of the organs and improves the doctor's view while providing more room to work. The needle is withdrawn, and the laparoscope is inserted through the navel. The doctor inspects the outside of the uterus, fallopian tubes, ovaries and other organs.

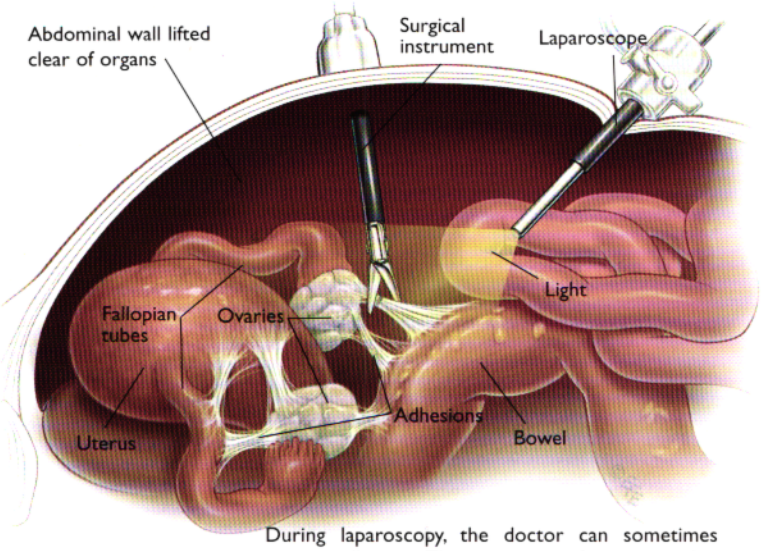
Other instruments may be inserted through one to four additional small incisions. The doctor uses the instruments to move the pelvic organs, get clear views of the area, and perform treatment.

Laparoscopic techniques have improved greatly over the past 20 years, and a wide range of procedures can be performed, including:

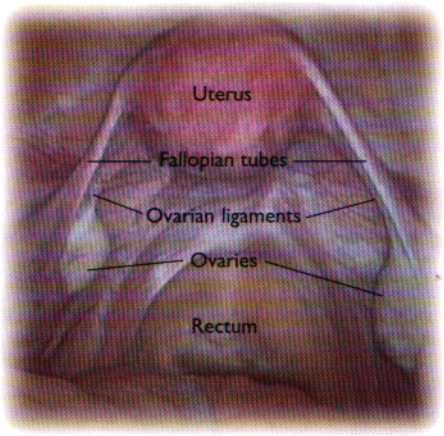
- ablation of abnormal tissue using laser light or electrical current
- cutting and removal of small or large amounts of tissue
- cautery to stop the bleeding of small blood vessels
- tying of larger blood vessels to stop bleeding
- repair of damaged tissues using synthetic materials
- repair of an organ that may be injured during laparoscopy.

After treatment is completed, all instruments are removed. The carbon dioxide gas is released from the abdominal cavity. Each small incision may be closed with a stitch, surgical tape or surgical glue. In some cases, a slender tube may be inserted into one of the incisions to allow carbon dioxide gas and fluids to drain.

Laparoscopy may be performed in combination with hysteroscopy, the insertion of a thin telescope (hysteroscope) into the uterus through the cervix so the doctor can inspect the inside of the uterus. The patient education pamphlet *Hysteroscopy - a guide for women* is available from your doctor.



During laparoscopy, the doctor can sometimes remove adhesions. These are areas of scar tissue that often cause or contribute to abnormal pain and infertility.



The uterus, fallopian tubes and ovaries as viewed through a laparoscope.

Conversion to open surgery

In some cases, the doctor may find that it is not safe to continue the laparoscopy due to unexpected or life-threatening problems. The doctor may have to immediately convert the surgery from laparoscopy to laparotomy (open surgery). The single larger incision in the abdomen may run vertically or horizontally.

The patient may be disappointed that she has had open surgery instead of laparoscopy, but open surgery in these circumstances is done in the interests of her safety and well-being. The decision to convert to open surgery should be considered sound judgement.

You may wish to discuss with your doctor the possibility of conversion to open surgery and its benefits and risks. Some patients may choose to have a laparotomy rather than laparoscopic surgery, in the first instance. Some doctors may recommend a laparotomy for some procedures.

RECOVERY AFTER LAPAROSCOPY

The length of your hospital stay depends on the amount of surgery performed. If you had an advanced laparoscopy (for example, a hysterectomy), you may need to stay in hospital for a few days.

If the laparoscopy was done for diagnosis only, with little or no treatment, then it is generally performed as a day-only procedure. Most women can go home within hours of a simple diagnostic laparoscopy. However, about one patient in every 40 has to stay overnight because of pain, persisting nausea or other problem.

Arrange for a relative or friend to drive you home from hospital. After general anaesthesia, avoid driving for at least 24 hours, and do not make any important decisions for about two days. If non-dissolving stitches are used, they are usually removed from skin incisions about four to seven days after surgery.

Ask your surgeon about when you can return to work and resume normal activities. Avoid heavy lifting and strenuous exercise for about four weeks.

Some symptoms or signs may last for several days, including:

- tiredness
- muscle pain
- mild nausea
- pain or discomfort at the site of the incisions
- cramps similar to period cramps
- vaginal discharge or bleeding
- a sensation of swelling of the abdomen
- sluggish bowel and slow return to normal bowel function
- pain in one or both shoulders, which may extend into the neck. The carbon dioxide gas used during the procedure is thought to be the cause. Lying down flat often helps. Paracetamol is usually enough to relieve the pain. The doctor can prescribe stronger pain relief medication if needed.

Attend all follow-up appointments. Depending on the reason for the laparoscopy, you may need to discuss further treatment plans with the doctor or have tests to find out whether or not any laparoscopic treatment was successful.

POSSIBLE COMPLICATIONS OF LAPAROSCOPY

All surgery carries some degree of risk. While your doctor makes every attempt to minimise risks, complications may occur that may have permanent effects. It is not usual for the doctor to outline every possible side effect or rare complication of a surgical procedure. However, it is important that you have enough information about possible complications to fully weigh up the risks and benefits of surgery. Most complications are uncommon, especially in young, healthy women. If treatment for a complication is needed, another specialist may be consulted. This is done in the best interests of the patient.

The following possible complications are listed to inform you, not to alarm you. There may be other complications that are not listed.

General surgical risks

- Heavy bleeding may occur during, soon after, or (uncommonly) some days after laparoscopic or open surgery. To treat this, a blood transfusion may be needed, but it is uncommon. In very rare cases, heavy bleeding can cause death if expert medical assistance is not available.
- Infection may require treatment with antibiotics.
- Anaesthetic risks, as for other types of surgery.
- Uncommonly, cardiovascular complications may include heart attack, stroke or deep venous thrombosis (DVT).

Specific risks of laparoscopy

- A cut or puncture damage to structures such as the abdominal wall, a major blood vessel, bladder, ureter, stomach, small intestine or large intestine. This type of injury is uncommon and occurs about once in every 500 to 2,000 procedures. Patients who are thin or obese, or who have had previous surgery to the abdomen, may have an increased risk of this type of injury.
- Persistent pain in the operated area.
- Injury to a reproductive organ may increase the risk of infertility or poor fertility. In some cases, the injured reproductive organ may have to be removed.
- Laparotomy (open surgery) to repair damage to an organ. A badly damaged organ may need major surgical repairs. Very rarely, a colostomy (an external bag connected to the large intestine) may be needed; this is usually temporary.
- Peritonitis, an infection of the inside of the abdomen, is a rare complication. This can be life-threatening and may require further surgery. Treatment includes antibiotics.
- Incisional hernia. A laparoscopic incision may cause a portion of intestine to poke into the abdominal wall. Only surgery can treat it.
- Gas embolism. A bubble of carbon dioxide gas may rarely enter the bloodstream. The gas embolism can travel to the heart and lungs, and may become life threatening. There is emergency treatment for a gas embolism.
- Heart arrhythmia in some patients due to carbon dioxide absorbed through the lining of the abdominal cavity. This resolves quickly with treatment.
- Heart problems. The pressure of carbon dioxide gas within the abdominal cavity can reduce the return of blood (from the lower body) to the heart, which can cause heart problems in some patients with heart disease.
- Most patients have a small degree of hypothermia (low body temperature) during laparoscopy. In older patients, this may trigger heart arrhythmia.
- Breathing problems. The inflation of the abdominal cavity with carbon dioxide gas puts pressure on the diaphragm and may cause breathing difficulty. The anaesthetist can treat this.
- Keloid or hypertrophic scarring. The scars from laparoscopy are usually small and faint, and heal well. A keloid or hypertrophic scar is inflamed, raised and itchy. These scars can be annoying, but do not pose a threat to health.
- Rarely, a nerve injury may occur due to positioning of the anaesthetised patient during the procedure.

Patients at increased risk

The risk of complications can be influenced by:

- obesity – an obese patient has an increased risk of complications for all types of abdominal surgery including laparoscopy. Fatty tissue within the abdomen may block the doctor's view of organs and may limit movement of the laparoscope and surgical instruments.
- age – older patients could have other conditions that may increase their risk of complications. The physical stress of anaesthesia and surgery may trigger a range of heart-related complications such as heart attack or cardiac arrhythmia.
- prior abdominal surgery – patients with previous abdominal surgery may have adhesions. Adhesions are bands of scar tissue that may cause an organ to "stick" to itself, to other organs, or to the abdominal lining. This increases the risk of injury to the organ during laparoscopy.

REPORT TO YOUR DOCTOR

Notify your doctor at once if you notice any of the following:

- fever (greater than 38°C) or chills
- increasing nausea and vomiting
- increasing or persisting abdominal or back pain
- persistent bleeding from the vagina
- pain or burning on passing urine or the need to pass urine frequently
- painful, swollen or very red incision
- an enlarging bruise under the incision site
- swollen abdomen
- any concerns you may have, especially if you are starting to feel worse.

If you cannot contact your doctor, go to your family doctor or Accident and Emergency at your nearest hospital.

COSTS OF TREATMENT

Your doctor can advise you about coverage by public health insurance, private health insurance and any out-of-pocket costs. You may want to ask for an estimate that lists the likely costs. Ask which costs can be claimed on private health insurance. As the course of actual treatment may differ from the proposed treatment, the final account may vary from the estimate. It is better to discuss costs with the doctor before laparoscopy rather than afterwards.

YOUR DOCTOR

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