PROCEDURE

Abdominal exploration

Abdominal exploration is surgery to inspect and sometimes treat organs inside the abdomen.

PURPOSE
Find and sometimes treat problems inside the abdomen

PROCEDURE TYPE
Diagnostic and therapeutic surgery, open or minimally invasive

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
Usually 1-4 hours, longer for complex treatment

PREPARATION
Fasting, medication review, tests, sometimes bowel preparation

RECOVERY
Same day to several days; no driving after general anaesthesia

MAIN RISKS
Bleeding, infection, organ injury, blood clots

RESULTS
Initial findings immediately; biopsy results after several days

Overview

Abdominal exploration is surgery that allows a surgeon to look directly at the organs and tissues inside your abdomen. It may be called an exploratory laparotomy when performed through one larger incision. When performed through several small cuts using a camera, it is called exploratory laparoscopy or keyhole surgery.

The surgeon may examine your stomach, bowel, liver, gallbladder, pancreas, spleen, bladder, reproductive organs and the lining of your abdomen. The exact area examined depends on why you need surgery.

Exploration can be diagnostic, meaning it is used to find the cause of a problem. It can also be therapeutic, meaning the surgeon treats a problem during the same operation. Treatment might include stopping bleeding, removing damaged tissue, draining infection, taking a biopsy

or repairing an injured organ.

Why the procedure is performed

Abdominal exploration may be offered when scans and other tests have not provided enough information, or when a problem probably needs surgery.

Reasons include:

In an emergency, exploration can help find and treat a dangerous problem without delaying for more tests. In planned surgery, it is usually considered after imaging, endoscopy or other less invasive tests.

- An abdominal injury that may have damaged internal organs
- Bleeding inside the abdomen
- A hole, blockage or loss of blood supply in the bowel
- A severe abdominal infection or collection of pus
- Unexplained pain or swelling when other tests are inconclusive
- A mass that needs examination or biopsy
- Suspected cancer that may have spread within the abdomen
- Scar tissue, called adhesions, that may be trapping the bowel

Who should and should not have it

Abdominal exploration may be appropriate if seeing the organs directly is the best way to make a diagnosis, prevent further harm or provide treatment. Your surgical team should explain what they expect to find, what they may treat and whether keyhole or open surgery is planned.

It is not the right first step for every abdominal problem. Surgery may be avoided when an ultrasound, CT scan, MRI scan, endoscopy or image-guided biopsy can answer the question with less risk.

A planned operation may be delayed if you have an uncontrolled medical problem that makes anaesthesia or healing less safe. Examples include a significant infection elsewhere in the body, poorly controlled heart or lung disease, or a blood-clotting problem that can be corrected first. Blood-thinning medicines may also require a specific plan.

In an emergency, delaying surgery may be more dangerous than proceeding. The team weighs that risk against your health and the likelihood that surgery will help.

Keyhole exploration may not provide enough access when there is major bleeding, severe bowel swelling, extensive scar tissue or a need for complex repair. The surgeon may recommend open surgery from the start or may need to change from keyhole to open surgery during the operation.

How to prepare

Follow the instructions from your treating facility, because its own instructions take priority. Preparation differs between planned and emergency surgery.

You will usually be told when to stop eating and drinking before general anaesthesia. Do not assume that water, chewing gum or sweets are allowed unless your instructions say so.

Give the team a complete list of your medicines, vitamins and supplements. This is especially important for blood thinners like warfarin or apixaban , diabetes medicines and medicines that affect the immune system. Do not stop a prescribed medicine unless the team responsible for your procedure tells you to.

Preoperative assessment may include blood tests, an electrocardiogram to check your heart rhythm, and imaging. Bowel preparation is not needed for every exploration, but it may be prescribed if bowel surgery is expected.

Arrange help with transport and your first days at home. If the operation is urgent, there may be little or no time for these preparations.

What happens during the procedure

You receive general anaesthesia, so you are unconscious and do not feel the operation. Monitoring equipment checks your breathing, heart rate, blood pressure and oxygen level. A breathing tube is usually placed after you are asleep.

For open exploration, the surgeon makes an incision in the abdomen, often down the middle. For keyhole exploration, the surgeon makes several small cuts, fills the abdomen with carbon dioxide gas to create working space, and inserts a camera and instruments.

The surgeon examines the relevant organs and tissues in a planned order. Fluid or tissue samples may be collected. If a treatable problem is found, the surgeon may repair an organ, remove diseased tissue, release scar tissue, stop bleeding or drain an infection.

Sometimes a section of bowel must be removed. The healthy ends may be reconnected, or an opening called a stoma may be made on the abdomen so waste can enter a bag. If this is a realistic possibility in planned surgery, it should be discussed during consent.

The surgeon closes the cuts with stitches, staples or surgical glue. A temporary drain or tube may be left in place.

Recovery and what to expect afterward

Pain is expected around the incision or keyhole cuts. You may also have shoulder-tip discomfort after laparoscopy because of the gas used during surgery. Pain relief should make it possible to breathe deeply, cough and move. Tell the hospital team if pain is not controlled or suddenly becomes worse.

Eating usually restarts gradually. You may begin with fluids and move to solid food as nausea settles and your bowel begins working. After bowel surgery or a prolonged operation, eating may need to restart more slowly.

Activity helps reduce the risks of chest infection and blood clots. Hospital staff will help you sit up and walk as soon as it is safe. At home, increase activity gradually and follow restrictions on lifting, exercise, bathing and wound care.

You cannot drive yourself home after general anaesthesia. Do not drive until the restriction given by your surgical team has ended, you are no longer taking medicines that impair alertness, and you can safely perform an emergency stop without pain limiting you.

Returning to work takes longer after an open operation than after uncomplicated keyhole surgery. The timing also reflects whether organs were repaired or removed and whether your work involves lifting or physical effort.

Risks and possible complications

The risks reflect both the exploration and any treatment performed during it. Your personal risk is influenced by the reason for surgery, whether it is an emergency and your general health.

Possible complications include:

Further surgery, drainage or antibiotics like amoxicillin or doxycycline may be needed if a significant complication develops.

- Bleeding that may require a transfusion or another procedure

- Infection of the wound or inside the abdomen
- Injury to the bowel, bladder, blood vessels or other organs
- A temporary slowing of the bowel, called ileus
- Leakage where bowel has been repaired or reconnected
- Blood clots in the legs or lungs
- Breathing, heart or allergic problems related to anaesthesia
- Scar tissue that may later cause pain or bowel blockage
- An incisional hernia, where tissue pushes through the healed wound
- Conversion from keyhole to open surgery

Results and follow up

The surgeon can usually describe the main findings after you wake from anaesthesia. You may not remember an early conversation clearly, so the information may be repeated later or shared with a person you have chosen.

Biopsy and laboratory results take longer. Many are available after several days, although specialised testing can take longer. The team should tell you how and when you will receive them.

Routine follow-up may include checking the wound, removing staples or drains, reviewing pathology results and discussing further treatment. Keep the scheduled appointment even if recovery is going well.

Alternatives

The realistic alternatives depend on what the team is trying to find or treat.

Ask what would be gained and lost by waiting or choosing a less invasive test in your particular situation.

- CT, MRI or ultrasound: No surgical incision and usually faster recovery, but imaging cannot always identify small injuries or provide treatment
- Endoscopy: Examines the inside lining of the stomach or bowel and can take biopsies, but cannot inspect the whole abdominal cavity

- Image-guided biopsy or drainage: Less invasive and useful for accessible masses or fluid collections, but may provide a limited sample or incomplete treatment
- Keyhole surgery instead of open surgery: Usually means smaller wounds and faster recovery, but may not provide enough access for major bleeding or complex repair
- Open surgery instead of keyhole surgery: Gives wider access and may be safer for complex treatment, but causes a larger wound and longer recovery
- Observation with repeat tests: Avoids immediate surgery when you are stable, but may delay diagnosis or treatment if the problem continues

When to call your healthcare team

For routine questions about dressings, activity, diet, work forms or an upcoming appointment, use the contact details provided at discharge.

Contact the surgical team promptly if you develop worsening pain, repeated vomiting, increasing abdominal swelling, fever, wound redness that is spreading, pus or unpleasant-smelling drainage, difficulty passing urine, or a wound that begins to open. Also call if you cannot pass gas or stool and this is accompanied by increasing pain or swelling.

Seek emergency medical help for trouble breathing, chest pain, fainting, confusion, heavy bleeding, coughing up blood, or sudden severe abdominal pain. One-sided leg swelling with chest pain or breathlessness may indicate a blood clot and also needs emergency assessment.

Common questions

Will I be asleep?

Yes. Abdominal exploration is normally performed under general anaesthesia, meaning you are unconscious throughout the operation.

Can I drive home?

No. Arrange for someone else to take you home. Driving restrictions continue until you meet the safety instructions given by your surgical and anaesthesia teams.

How painful is it?

Some pain is expected, especially after open surgery. Pain medicine, early movement and supporting the wound when coughing can help. Pain should gradually improve rather than become more severe.

When will I know what the surgeon found?

The main findings are usually explained after surgery. Biopsy or fluid-test results commonly take several days and sometimes longer.

Will I have a large scar?

Open exploration leaves a longer abdominal scar. Keyhole surgery usually leaves several small scars, although conversion to a larger incision may be necessary.

How long will I stay in hospital?

Some people go home the same day after uncomplicated keyhole exploration. Open surgery or treatment involving the bowel or another organ usually requires a hospital stay of several days.

Sources

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