PROCEDURE

Abdominal wall surgery

Abdominal wall surgery repairs a hernia, weakness, or other defect in the muscles and tissues covering the abdomen.

PURPOSE
Repair or strengthen a weak or damaged abdominal wall

PROCEDURE TYPE
Therapeutic surgery; open, laparoscopic, or robotic

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
Usually general; sometimes local for small repairs

HOW LONG IT TAKES
About 1 to 5 hours, based on repair complexity

PREPARATION
Fasting and medication adjustments, including blood thinners

RECOVERY
Same day to several days; no driving while impaired

MAIN RISKS
Infection, bleeding, recurrence, bowel injury

RESULTS
Repair assessed immediately; pathology takes days if tissue removed

Overview

Abdominal wall surgery repairs or rebuilds the skin, connective tissue, and muscle covering the abdomen. It is most often used for a hernia, which occurs when fat or an organ pushes through a weak area.

Surgery may also be needed after an earlier operation, injury, infection, or removal of abnormal tissue. A simple repair may close one opening. Complex reconstruction may rearrange muscle layers and use surgical mesh to reinforce weakened tissue.

The operation may be open, through one larger incision, or minimally invasive, using small incisions and a camera. Minimally invasive surgery may be laparoscopic or robot-assisted.

Why the procedure is performed

Abdominal wall surgery may be offered to:

Some hernias require urgent treatment because bowel or other tissue is trapped. Stable problems are usually treated with planned surgery based on the defect, symptoms, previous operations, and overall health.

- Repair a painful, enlarging, or activity-limiting hernia
- Return trapped tissue or bowel to the abdomen
- Repair a recurrent or incisional hernia
- Rebuild the abdominal wall after infection, injury, or tissue removal
- Improve abdominal wall strength and function

Who should and should not have it

Surgery may be appropriate when a hernia causes pain, limits activity, grows, or risks trapping bowel. A small hernia causing few problems may sometimes be monitored if surgery presents a greater risk.

Elective surgery may be delayed because of:

These issues may affect timing, technique, or mesh choice rather than rule out surgery. Emergency surgery may still be necessary if trapped tissue or bowel loses its blood supply.

- Active skin, mesh, or abdominal infection
- Poorly controlled heart, lung, or metabolic illness
- Poor nutrition or blood glucose control
- Smoking, which increases wound and breathing risks
- Planned pregnancy that could stretch the repair
- A need to lose weight before complex reconstruction

How to prepare

Follow your treating facility's instructions because preparation varies by operation and anaesthetic plan.

Tell the team about all medicines, supplements, allergies, previous abdominal operations, and

reactions to anaesthesia. Medicines that affect bleeding, including anticoagulants and antiplatelet medicines, may need adjustment. Do not stop them yourself; follow the plan provided by the prescribing and surgical teams.

You will usually need to stop eating before general anaesthesia. Clear-liquid and solid-food cut-off times may differ. Bowel preparation is not routine but may be required if bowel surgery is possible.

Arrange transport home and help with lifting, shopping, childcare, or wound care. If you smoke, stopping before surgery can reduce wound and breathing problems.

What happens during the procedure

Most operations use general anaesthesia. A small repair may sometimes use local anaesthesia with sedation.

The surgeon separates the hernia or damaged area from nearby tissues and returns fat or bowel to the abdomen when appropriate. The defect is then closed or reinforced.

Mesh may be placed above, within, or behind the muscle layers. Whether it is used depends on the defect, infection risk, tissue quality, and technique. During complex reconstruction, muscle layers may be released and repositioned so they meet without excessive tension.

The incision is closed with stitches, staples, glue, or a combination. Temporary drains may remove fluid. Additional treatment may be needed if unhealthy tissue or unexpected bowel damage is found.

Recovery and what to expect afterward

Pain: Soreness, pulling, and tightness are expected, especially during the first few days. Use pain medicine as directed. Support your abdomen with a pillow when coughing if helpful.

Eating: Begin with fluids and progress as nausea settles and bowel function returns. Anaesthesia, inactivity, and opioid medicines can cause constipation. Follow advice about fluids, fibre, and laxatives.

Activity: Gentle walking supports circulation and recovery. Avoid lifting and strenuous abdominal exercise until your team says the repair can tolerate them. Restrictions are usually longer after complex reconstruction.

Driving: Do not drive while drowsy from medicine or if pain prevents safe braking, turning, or seat-belt use. Follow any anaesthesia-related restrictions.

Work: Desk work may resume sooner than work involving lifting or physical labour. Ask for written restrictions if needed.

You may go home the same day or remain in hospital for several nights. Drains may stay in place after discharge.

Risks and possible complications

Risks depend on the repair, previous operations, infection, smoking, other health conditions, and whether bowel is involved.

Possible complications include:

A seroma can resemble the original hernia but often settles without treatment. The team may examine or scan it if the diagnosis is uncertain.

- Bleeding, bruising, or blood collecting under the wound
- Wound or mesh infection
- Seroma, or fluid collecting near the repair
- Delayed healing or separation of the wound
- Ongoing numbness, pain, or tightness
- Injury to bowel, bladder, blood vessels, or nearby organs
- Bowel blockage or internal scar tissue
- Blood clots, breathing problems, or anaesthetic reactions
- Mesh movement, shrinkage, exposure, or erosion
- Return of the hernia or abdominal wall weakness

Results and follow up

The surgeon can usually confirm during the operation whether the defect was closed and reinforced. Laboratory results take several days if tissue was removed.

Follow-up checks the incision, pain, bowel function, activity, and drains. Later visits may assess strength and recurrence. Contact the team if you cannot attend or if a drain falls out, stops working, or changes unexpectedly. Continue lifting and wound-care restrictions even when you feel better.

Alternatives

Alternatives depend on the urgency and reason for surgery:

There may be no safe non-surgical option if bowel is trapped or losing its blood supply. Delaying treatment can cause serious harm.

- Watchful waiting: Avoids immediate surgery but does not repair the defect.
- An abdominal binder: May provide temporary support but does not close a hernia.
- Health optimization: Weight management, smoking cessation, nutrition support, and control of other conditions may reduce risk but delay repair.
- Suture repair without mesh: Avoids permanent mesh but may provide less reinforcement.
- A different surgical approach: Open, laparoscopic, and robotic techniques have different benefits and limitations.

When to call your healthcare team

Contact the surgical team about pain that is not improving, constipation, minor wound drainage, medication questions, or uncertainty about activity.

Seek urgent medical advice for:

Call emergency services for severe breathing difficulty, chest pain, fainting, uncontrolled bleeding, or sudden severe abdominal pain. A painful hernia that becomes firm, cannot be pushed back when it normally can, or occurs with vomiting or skin colour change also requires emergency assessment.

- Increasing redness, warmth, swelling, or pus at the incision
- Fever at or above the threshold given by your facility
- Repeated vomiting or inability to keep fluids down
- A rapidly enlarging abdomen or worsening abdominal pain
- A wound that opens
- A drain that falls out, stops working, or changes unexpectedly

Common questions

Will I be asleep?

Usually. Most repairs use general anaesthesia, although a small repair may use local anaesthesia with sedation.

Can I drive home?

No. Arrange for a responsible adult to take you home. Do not drive until you are alert, off impairing pain medicine, and able to control the vehicle safely.

How painful is abdominal wall surgery?

Discomfort ranges from mild soreness after a small repair to more substantial pain after reconstruction. It should gradually improve. Report sudden, worsening, or uncontrolled pain.

When will I know if the surgery worked?

The surgeon assesses the repair during the operation. Long-term success is evaluated during recovery and follow-up.

Will I have surgical mesh?

Not necessarily. Mesh often reinforces larger or higher-risk defects. Ask what material is proposed, where it will be placed, and why it is recommended.

How long will the repair last?

Many repairs remain secure long term, but recurrence is possible. Healing, infection, tissue quality, smoking, body weight, and repeated abdominal strain can affect durability.

Sources

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