PROCEDURE

Ventral hernia repair

Ventral hernia repair is surgery to close a weakness in the front abdominal wall.

PURPOSE
Close the abdominal wall defect and reduce hernia recurrence

PROCEDURE TYPE
Therapeutic surgery, performed open or minimally invasively

WHERE IT IS DONE
Operating theatre, as same-day or inpatient surgery

ANAESTHESIA
General; local with sedation for selected small open repairs

HOW LONG IT TAKES
1-3 hours; longer for complex reconstruction

PREPARATION
Fasting and a medication plan from the surgical team

RECOVERY
Same day or overnight; no driving after anaesthesia or opioids

MAIN RISKS
Infection, bleeding, recurrence, bowel injury

RESULTS
Repair confirmed immediately; long-term success assessed during follow-up

Overview

A ventral hernia repair closes a weak area or opening in the front of your abdominal wall. Fat or part of the intestine may push through this opening and form a bulge.

Ventral hernias include hernias near the belly button, above the belly button, or through the scar from an earlier operation. A hernia through an old surgical scar is called an incisional hernia.

The repair may be done through one larger cut, called open surgery, or through several small cuts using a camera and long instruments. Minimally invasive surgery may be laparoscopic or robot-assisted. Robot-assisted surgery still requires a surgeon to control the instruments.

The surgeon may close the opening with stitches alone or reinforce it with surgical mesh. Mesh is a sheet-like material that supports the weakened abdominal wall. The best approach

depends on the hernia's size, location, previous repairs, and your overall health.

Why the procedure is performed

The aim is to return the tissue to the abdomen, close the opening, and lower the chance that the hernia will come back.

Repair may be offered when a hernia:

A planned repair allows time to discuss the surgical method and improve health factors that affect healing. If intestine becomes trapped or loses its blood supply, emergency surgery may be needed.

- Causes pain, pressure, or limits normal activity
- Is getting larger
- Cannot easily be pushed back into the abdomen
- Develops after an earlier abdominal operation
- Has a concerning risk of trapping intestine
- Causes an intestinal blockage or loss of blood supply

Who should and should not have it

Repair may be reasonable if the hernia is painful, growing, difficult to reduce, or affecting your daily life. Your surgeon will consider the likely benefit against the risks of anaesthesia, wound problems, and recurrence.

Surgery may be delayed if you have an active infection, poorly controlled medical condition, or another issue that makes anaesthesia unsafe. Smoking, high blood sugar, and excess body weight can increase wound and recurrence risks. Your team may recommend addressing these before a planned operation.

Timing may also need discussion if you are pregnant or planning a pregnancy because the abdominal wall stretches during pregnancy.

A small hernia causing little or no trouble does not always need immediate repair. Monitoring may be an option. However, surgery should not be delayed for health optimisation if the hernia is causing bowel obstruction or has trapped tissue with reduced blood supply.

How to prepare

Your treating facility's own instructions take priority because preparation differs by operation and anaesthetic plan.

Tell the surgical team about all medicines, supplements, allergies, previous reactions to anaesthesia, and implanted medical devices. Blood thinners and medicines that affect blood sugar may require a specific plan. Do not stop a prescribed medicine unless the treating team tells you to.

You will usually need to stop eating and drinking before anaesthesia. Follow the exact fasting times provided. Bowel preparation is not routine for every ventral hernia repair, but it may be required for some complex operations.

You may have blood tests, heart testing, or imaging before surgery. If you smoke, stopping before surgery can support wound healing. Your team may also discuss blood sugar control, nutrition, and weight where relevant.

Arrange for an adult to take you home and stay with you after same-day surgery. Bring loose clothing that will not press against the wound.

What happens during the procedure

After you arrive, the team confirms the operation and marks the surgical area if needed. You receive anaesthesia and medicines for pain and nausea. Most repairs use general anaesthesia, which means you are unconscious. Selected small open repairs may use local anaesthesia with sedation.

For an open repair, the surgeon makes a cut over or near the hernia. For minimally invasive surgery, the surgeon places a camera and instruments through several small cuts.

The surgeon separates the hernia sac from nearby tissue and returns fat or intestine to the abdomen. The opening in the abdominal wall is then closed. Mesh may be placed beneath, within, or above the muscle layers to strengthen the repair. The choice of mesh and position is based on the operation and condition of the surrounding tissue.

Large or complex hernias may require abdominal wall reconstruction. This can involve releasing layers of muscle so the opening can be closed without excessive tension.

The surgeon checks for bleeding and may place a temporary drain to remove fluid. The cuts are closed with stitches, staples, skin adhesive, or a combination. A dressing is placed over the wound.

Recovery and what to expect afterward

Pain and tightness are expected around the repair, especially when standing, coughing, or changing position. Your team will provide a pain-control plan. Holding a pillow against your abdomen may make coughing more comfortable. Contact the team if pain is getting worse rather than gradually improving.

You can usually begin drinking and eating as the anaesthetic wears off. Start with foods you tolerate. Constipation can occur after surgery, particularly with opioid pain medicines. Fluids, movement, and the bowel plan provided by your team may help.

Walking soon after surgery supports circulation and bowel function. Increase activity gradually, but follow the surgeon's limits on lifting, exercise, and abdominal strain. A supportive abdominal binder may improve comfort if your team recommends one, but it does not replace the repair.

Do not drive while affected by anaesthesia, sedation, opioid pain medicine, or pain that prevents safe braking and movement. After general anaesthesia, you will need someone else to drive you home.

Return to work depends on the operation and your job. Desk work may be possible sooner than work involving lifting or repeated bending. Complex reconstruction generally requires a longer recovery. Follow the personalised plan from your surgeon rather than a fixed calendar.

Swelling, bruising, or a firm ridge beneath the wound can occur. A pocket of clear fluid, called a seroma, may also develop where the hernia used to be. These findings do not always mean that the repair has failed, but your team should assess swelling that is increasing or painful.

Risks and possible complications

Possible complications include:

Mesh can lower recurrence risk for many repairs, but it has its own risks. These include infection, movement or shrinkage of the mesh, attachment to nearby organs, and rarely an abnormal connection involving the intestine. Infected mesh sometimes needs to be removed.

Your personal risk is influenced by the hernia's size and location, previous repairs, contamination or infection, smoking, diabetes, and the type of operation.

- Bleeding or a collection of blood under the skin
- Wound or mesh infection

- Fluid collecting near the repair
- Ongoing or chronic pain
- Hernia recurrence
- Injury to intestine, bladder, blood vessels, or nearby tissue
- Intestinal blockage or scar tissue inside the abdomen
- Blood clots, breathing problems, or reactions to anaesthesia

Results and follow up

The surgeon will know at the end of the operation whether the opening was closed as planned. Ventral hernia repair does not usually require laboratory testing of tissue. If tissue was removed and sent for examination, those results may take several days.

Before discharge, you should receive instructions about wound care, bathing, medicines, lifting, and follow-up. A routine appointment may be scheduled to check healing, remove staples or drains, and discuss returning to normal activity.

Long-term success is judged by symptom improvement, wound healing, and whether the hernia returns. Report a new or enlarging bulge, even if it appears months or years later.

Alternatives

Watchful waiting may be suitable for a small hernia that causes little or no trouble. It avoids immediate surgical and anaesthetic risks, but it does not close the opening. The hernia may enlarge or become more difficult to repair, and urgent problems can still occur.

An abdominal binder may reduce pulling or support the area during activity. It does not repair the abdominal wall or prevent all complications.

Weight management, smoking cessation, and improved blood sugar control can make a future operation safer. These steps may reduce pressure on the repair but will not close an existing hernia.

If surgery is chosen, alternatives include open, laparoscopic, or robot-assisted repair. Open surgery may be better for some large or complex hernias but usually requires a larger incision. Minimally invasive surgery uses smaller cuts and may reduce some wound problems, but it is not appropriate for every hernia.

Stitch-only repair avoids permanent mesh, but the hernia may be more likely to return,

particularly when the opening is larger. Mesh reinforcement can reduce recurrence for many repairs while adding mesh-specific risks.

When to call your healthcare team

For routine advice, contact your surgical team if you have increasing wound redness, drainage, fever, worsening pain, repeated vomiting, trouble passing urine, or swelling that continues to enlarge. Also call if the wound opens or you develop a new bulge.

Seek urgent medical assessment for severe or rapidly worsening abdominal pain, persistent vomiting, a hard or very tender bulge, skin over the hernia turning dark or red, or an inability to pass stool or gas.

Call emergency services for trouble breathing, chest pain, fainting, confusion, or other severe symptoms. These are emergency concerns rather than issues to wait on until a routine follow-up visit.

Common questions

Will I be asleep?

Most ventral hernia repairs use general anaesthesia, so you are unconscious. Some small open repairs can be done with local anaesthesia and sedation.

Can I drive home?

No. Arrange for another adult to drive you. Do not resume driving while affected by anaesthesia, opioid medicine, or restricted movement.

How painful is it?

Pain, tightness, and soreness are expected at first. The amount depends on the size and method of repair. It should generally improve during recovery.

When will I know if it worked?

The surgeon can confirm the repair immediately. Long-term success becomes clearer as swelling settles and the abdominal wall heals.

Will I have mesh?

Not always. Mesh is commonly considered when it is expected to strengthen the repair. Your surgeon should explain why mesh or stitches alone are recommended for you.

How long will I be in hospital?

Some people leave the same day. An overnight or longer stay may be needed after a large repair, complex reconstruction, emergency surgery, or if additional monitoring is required.

Sources

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