PROCEDURE

Umbilical hernia repair

Surgery that closes an opening near the belly button where tissue can bulge through

PURPOSE
Close the abdominal wall opening and prevent tissue trapping

PROCEDURE TYPE
Therapeutic surgery, performed open or minimally invasively

WHERE IT IS DONE
Operating theatre, usually as outpatient surgery

ANAESTHESIA
General, sometimes local with moderate sedation for open repair

HOW LONG IT TAKES
About 30 to 90 minutes

PREPARATION
Fasting and a medication plan, especially for blood thinners

RECOVERY
Usually same day; no driving after anaesthesia

MAIN RISKS
Infection, bleeding, recurrence, bowel or organ injury

RESULTS
Repair confirmed immediately; healing assessed at follow-up

Overview

Umbilical hernia repair is surgery to close a weak area or opening in the abdominal wall at the belly button. Fat or part of the intestine can push through this opening and form a bulge.

The repair may be done through one cut near the belly button, called open surgery. It can also be performed through several small cuts using a camera and long instruments. This is called laparoscopic or minimally invasive surgery. Some facilities use robotic instruments for the same basic approach.

The surgeon closes the opening with stitches. A surgical mesh may also be placed to strengthen the area and reduce the chance of the hernia returning. Mesh is used more often in adults, especially for larger openings. The choice depends on the hernia's size, previous operations, infection risk and your general health.

Most planned repairs are outpatient procedures, meaning you go home the same day.

Why the procedure is performed

Repair may be offered when an umbilical hernia:

In adults, an umbilical hernia usually does not close by itself. Surgery is the only way to close the opening, although a small hernia without troublesome symptoms may sometimes be monitored.

Many umbilical hernias in babies close naturally during early childhood. Surgery is often considered if the opening remains after about age 4 or 5, is large, causes symptoms or develops a complication. Timing should be discussed with a pediatric surgeon.

Urgent surgery may be needed if intestine becomes trapped and loses its blood supply. This is called strangulation.

- Causes pain, pressure or limits normal activity
- Is growing or has a significant opening
- Cannot be gently pushed back into the abdomen
- Has trapped fat or intestine
- Affects appearance enough that you want it repaired
- Remains open in an older child

Who should and should not have it

You may be offered repair if the expected benefit of closing the hernia outweighs the risks of surgery. The decision should consider your symptoms, the size and contents of the hernia, your daily activities and your preferences.

A planned operation may be avoided or delayed when:

These factors do not always rule out surgery. Your team may first recommend treatment or risk reduction, such as controlling blood sugar, stopping smoking or managing abdominal fluid.

Planned surgery should not be delayed for risk-reduction measures if the hernia is strangulated or causing another emergency.

- A young child has a small, symptom-free hernia that may close naturally
- You are pregnant and the repair can safely wait until after pregnancy

- You have an active skin or abdominal infection
- A heart, lung or other medical condition makes anaesthesia unusually unsafe
- Poorly controlled diabetes, smoking, severe obesity or fluid in the abdomen would make healing less reliable

How to prepare

Your treating facility's own instructions take priority because fasting and medication plans differ by facility and type of anaesthesia.

Tell the surgical team about all prescription medicines, over-the-counter medicines, supplements and allergies. Blood thinners and medicines that affect blood sugar may need a specific plan. Do not stop a prescribed medicine unless the treating team tells you to.

You will usually need to stop eating for several hours before surgery. Instructions may allow clear liquids for part of that time. Follow the exact cut-off times you receive.

Arrange for a responsible adult to take you home. If you will have general anaesthesia or sedation, you may also need someone to stay with you for the first night.

Tell the team before surgery if you develop a fever, respiratory illness, new rash or broken skin near the belly button. The procedure may need to be rescheduled.

What happens during the procedure

Before surgery, the team confirms the planned operation and marks the site if needed. You may receive medicine to prevent blood clots or infection based on your individual risks.

Most repairs use general anaesthesia, so you are unconscious and do not feel the operation. Some smaller open repairs can be performed using local anaesthetic to numb the area, with or without moderate sedation.

For an open repair, the surgeon makes a cut near the belly button. The bulging fat or intestine is returned to the abdomen. The opening is closed with strong stitches, with mesh added when appropriate.

For minimally invasive repair, the surgeon inserts a camera and instruments through small abdominal cuts. Gas creates working space inside the abdomen. Mesh is commonly secured over the opening from inside.

The skin is closed with stitches, surgical glue or small dressings. The shape of the belly button may look different afterward, although the surgeon generally tries to preserve it.

Recovery and what to expect afterward

Pain: Soreness, pulling or bruising around the repair is expected. Minimally invasive surgery can also cause temporary shoulder discomfort from the gas used during the operation. Use pain medicine as directed. Supporting the area with your hand or a pillow may make coughing more comfortable.

Eating: You can usually drink and then eat after you are awake and not nauseated. Start with light foods if your stomach feels unsettled. Constipation can occur after anaesthesia, reduced activity or opioid pain medicines.

Activity: Gentle walking is encouraged soon after surgery. Avoid heavy lifting and strenuous abdominal exercise until your surgeon says the repair can handle them. Instructions differ according to the repair's size and whether mesh was used.

Driving: Do not drive home. Wait until the effects of anaesthesia have passed, you are no longer taking medicines that impair alertness, and you can brake or turn comfortably in an emergency.

Work: People with desk-based work may return sooner than those whose jobs involve lifting or physical labour. Ask for a work note that reflects your operation and job demands.

Swelling, bruising or a firm ridge beneath the wound can occur during healing. A small fluid collection, called a seroma, may temporarily resemble the original bulge.

Risks and possible complications

Possible risks include:

Mesh can lower the chance of some hernias returning, but it introduces mesh-specific risks such as infection or chronic discomfort. Ask why mesh is or is not recommended for your repair.

Your personal risk is influenced by the hernia's size, previous operations, smoking, body weight, diabetes and whether surgery is planned or urgent.

- Bleeding or a collection of blood under the skin
- Wound or mesh infection
- Fluid collecting near the repair
- Ongoing pain, numbness or altered sensation
- The hernia returning

- Injury to intestine, blood vessels or nearby organs
- Blood clots, breathing problems or reactions to anaesthesia
- Scar tissue that may contribute to later bowel blockage

Results and follow up

The surgeon can confirm immediately that the opening has been closed. There is usually no laboratory result to wait for unless tissue was removed for testing.

Before discharge, you should receive instructions about wound care, bathing, pain relief and activity. A routine follow-up visit may occur within the following days or weeks. The team will check the incision, discuss your return to normal activity and look for signs that the hernia has returned.

Keep the follow-up appointment even if recovery seems straightforward. Contact the team sooner for wound concerns or symptoms that are not improving as expected.

Alternatives

Alternatives depend on your symptoms and the risk of tissue becoming trapped.

Watchful waiting avoids surgery and anaesthesia for now. It may be reasonable for some small, easily reducible hernias that cause little or no discomfort. It does not close the opening, and the hernia may enlarge or become painful.

Observation in young children allows time for the opening to close naturally. The trade-off is ongoing monitoring and the possibility that surgery will still be needed later.

A supportive binder or truss may make a bulge feel more secure for a short time, but it does not repair the abdominal wall. It can irritate the skin and should not delay assessment of a painful or trapped hernia.

There is no medicine or exercise program that closes an umbilical hernia. Weight management and smoking cessation may make future surgery safer, but they do not repair the existing opening.

When to call your healthcare team

Contact your surgical team during normal hours for routine concerns such as persistent

constipation, pain that is not gradually improving, questions about dressings or uncertainty about returning to work and exercise.

Seek prompt medical advice if you have:

Seek emergency care for sudden severe pain, a firm bulge that will not go back in, red or dark skin over the hernia, repeated vomiting, marked abdominal swelling, or inability to pass stool or gas. These can be signs of trapped or strangulated intestine.

Call emergency services for severe breathing difficulty, chest pain, collapse or other immediately life-threatening symptoms.

- Increasing redness, warmth, swelling or drainage from the wound
- Fever or chills
- Repeated vomiting or difficulty keeping fluids down
- Worsening abdominal pain
- A wound that opens
- New swelling that continues to enlarge

Common questions

Will I be asleep?

Most repairs are performed under general anaesthesia, so you are asleep. A small open repair may sometimes use local anaesthetic with sedation. Your anaesthesia plan should be explained before you consent.

Can I drive home?

No. Arrange for someone to take you home. Do not resume driving until anaesthesia and sedating medicines have worn off and you can control the vehicle safely without significant pain.

How painful is it?

Soreness is expected, especially when standing, coughing or changing position. It should generally improve over time. Tell the team if pain is severe, worsening or not controlled by the recommended medicines.

When will I know if it worked?

The surgeon knows during the operation whether the opening was closed. Longer-term success is judged as the area heals and during follow-up.

Will I need mesh?

Not everyone needs mesh. It is more commonly recommended for adult or larger hernias because it can strengthen the repair. The surgeon should explain the benefits and mesh-related risks in your situation.

Can the hernia come back?

Yes. Recurrence is possible after any repair. The risk is affected by the repair method, opening size, wound healing, smoking, body weight and pressure inside the abdomen.

Sources

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- American Academy of Pediatrics, HealthyChildren.org. Umbilical Hernias in Babies and Children: What Parents Need to Know