PROCEDURE

Imperforate anus repair

Imperforate anus repair is surgery to create an anal opening and connect the rectum to it.

PURPOSE
Create a functional anal opening and route stool safely

PROCEDURE TYPE
Therapeutic surgery, open or laparoscopic-assisted

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
About 1-4 hours, based on anatomy and surgical stage

PREPARATION
Fasting, imaging, medicines review, sometimes bowel or stoma preparation

RECOVERY
Several hospital days; no driving until the surgical team gives clearance

MAIN RISKS
Infection, narrowing, organ injury, and bowel-control problems

RESULTS
Repair seen immediately; bowel function becomes clearer over years

Overview

Imperforate anus repair is surgery for an anorectal malformation present from birth. In this condition, the anus may be missing, too narrow, or in the wrong place. The rectum, which is the last part of the bowel, may end blindly or connect to the urinary or genital system through an abnormal channel called a fistula.

The operation creates an anal opening and brings the rectum through the muscles that help control bowel movements. If there is a fistula, the surgeon usually closes it.

The exact operation is based on the child's anatomy. Some babies can have a primary repair soon after birth. Others first need a colostomy, which brings the bowel to an opening on the abdomen so stool empties into a bag. The definitive repair and colostomy closure are then performed later as separate operations.

Why the procedure is performed

The repair gives stool a safer route out of the body. It also aims to place the rectum within the anal sphincter muscles, which are the muscles used for bowel control.

Surgery may be performed to:

The operation corrects the anatomy, but it cannot always create normal bowel function. Bowel control is also affected by how well the muscles, nerves, spine, and rectum developed before birth.

- Create an anal opening
- Connect the rectum to that opening
- Close a connection to the urinary or genital tract
- Relieve or prevent bowel blockage
- Give the child the best possible chance of bowel control

Who should and should not have it

Most children with an absent or incorrectly connected anus need surgery. The timing and type of repair are chosen after the surgical team identifies where the rectum ends and whether a fistula is present.

A primary repair may be suitable when the anatomy is clearly defined and the child is medically stable. A staged approach with a colostomy may be safer for a higher or more complex malformation.

Definitive repair may be delayed if the child:

In these situations, temporary bowel drainage may be needed before the full repair. Rarely, severe life-limiting medical problems may make major reconstruction inappropriate. The family and specialist team then discuss care based on the child's comfort and overall outlook.

- Is premature or not stable enough for a longer operation
- Has serious heart, lung, or other medical problems needing treatment first
- Has an infection or another condition that raises the immediate surgical risk
- Needs more imaging to define the rectum and nearby organs
- First requires urgent relief of bowel obstruction

How to prepare

The treating facility's own instructions take priority because preparation differs between a newborn repair, a later pull-through operation, and colostomy closure.

The child will usually need to stop breast milk, formula, food, and clear fluids at specific times before anaesthesia. Follow the exact fasting times provided. Tell the team if the child develops a fever, cough, vomiting, diarrhoea, or another illness before surgery.

Give the team a complete list of medicines, vitamins, and supplements. Do not stop a prescribed medicine, including a blood thinner like warfarin or apixaban , unless the surgical or anaesthesia team tells you to do so.

Testing may include abdominal and pelvic imaging, heart and kidney checks, and assessment of the spine. If a colostomy is already present, a contrast study may be used to show the rectum and any fistula. The team may also order bowel irrigation, stoma preparation, or antibiotics like amoxicillin or doxycycline .

What happens during the procedure

The child receives general anaesthesia and remains unconscious during the operation. Monitoring equipment tracks breathing, heart rate, blood pressure, oxygen level, and temperature. A urinary catheter may be placed.

A common operation is a posterior sagittal anorectoplasty, often shortened to PSARP. The surgeon makes an incision between the buttocks and carefully separates the rectum from any fistula. The rectum is moved into the centre of the sphincter muscles and attached to a new opening in the skin. The muscle location may be checked using gentle electrical stimulation.

For a rectum located higher in the pelvis, the surgeon may use keyhole abdominal surgery to help free and guide it downward. This is called a laparoscopic-assisted pull-through. Some complex repairs require an open abdominal incision.

If treatment is staged, the first operation creates a colostomy. The pull-through repair follows after the child has grown and the anatomy has been mapped. The colostomy is closed in another operation after the new anus has healed.

Recovery and what to expect afterward

Pain and soreness are expected around the incision. The care team will provide pain relief and

check that the child can rest comfortably. Increasing pain rather than gradual improvement should be reported.

Fluids and feeding are restarted according to the operation and bowel recovery. Some children can feed relatively soon, while others need intravenous fluids until the bowel begins working. The team will explain how to protect the wound from stool and how to care for a colostomy, if present.

Activity is limited while the area heals. Follow instructions about positioning, bathing, lifting, tummy time, bicycle riding, and activities that put pressure on the perineum. Older children should avoid sports until cleared.

A baby or young child must go home with a responsible adult who is not also recovering from anaesthesia. An older patient must not drive until the surgical team gives clearance and they are no longer taking medicines that affect alertness.

A parent or caregiver may need time away from work for wound care, appointments, or anal dilations. School or childcare can usually restart when pain is controlled, feeding is established, and the team considers the wound ready.

After healing begins, the surgeon may prescribe anal dilations. These use smooth dilators to keep the new opening from becoming too narrow. The team should demonstrate the correct size, technique, and schedule. Do not start or change dilations without their instructions.

Risks and possible complications

Anaesthesia and surgery always involve some risk. The team will discuss risks related to the child's anatomy and other medical conditions.

Possible complications include:

Constipation, stool leakage, or difficulty controlling bowel movements may continue even when the repair heals well. These problems can reflect the original development of the bowel, muscles, nerves, or spine rather than a failure of the operation. Many children benefit from a structured bowel-management program.

- Bleeding, infection, or wound separation
- Narrowing of the new anal opening
- Rectal prolapse, where rectal tissue pushes outward
- A persistent or recurring fistula
- Injury to the urinary tract, vagina, reproductive structures, or nearby nerves

- Problems healing or reduced blood supply to the moved rectum
- Complications involving a colostomy or its later closure

Results and follow up

The surgeon can usually confirm immediately whether the rectum has been brought through the new opening and whether a known fistula was closed. Bowel function takes much longer to assess.

Follow-up checks the wound, anal opening, bowel movements, urination, growth, and nutrition. If dilations are prescribed, the surgeon will adjust them over time. A planned colostomy closure occurs only after the repair has healed sufficiently.

Constipation or soiling may become more noticeable during toilet training and later childhood. Treatment can include diet changes, laxatives, enemas, or a formal bowel-management program. Some children also need follow-up for urinary, spinal, or genital conditions associated with their malformation.

Alternatives

There is usually no non-surgical way to create a missing anal opening. However, there may be choices about timing and surgical approach.

A temporary colostomy relieves obstruction and keeps stool away from the repair area. It can make a complex repair safer, but requires a stoma bag and at least one additional operation.

A primary repair avoids a period with a colostomy and may reduce the number of operations. It may not be appropriate when the rectum is high, the anatomy is uncertain, or the child is medically unstable.

A laparoscopic-assisted repair uses small abdominal incisions and can help with a high rectum. A perineal repair avoids abdominal access but may not provide enough reach for some malformations.

Dilation may help a narrow but existing anal opening in selected cases. It cannot create an anus when the rectum does not connect to the skin. Observation alone does not correct a blocked or abnormally connected rectum.

When to call your healthcare team

Contact the surgical team promptly for routine postoperative concerns such as worsening constipation, trouble performing prescribed dilations, persistent skin irritation, or questions about feeding and stoma supplies.

Seek same-day medical advice for:

Call emergency services for trouble breathing, difficulty waking the child, heavy bleeding, green vomit with marked abdominal swelling, or a sudden severe decline.

- Fever, especially any fever in a baby younger than 3 months
- Increasing pain, swelling, redness, drainage, or wound separation
- Repeated vomiting or a swollen abdomen
- No stool or gas when the team expects bowel function
- Trouble urinating or a major change in urine output
- A new bulge or tissue protruding from the anus
- A stoma that becomes unusually dark, pale, swollen, or stops working

Common questions

Will my baby be asleep?

Yes. Imperforate anus repair is performed under general anaesthesia. The child is unconscious and monitored throughout the operation.

Can we drive home afterward?

A responsible adult should drive. An older patient who had anaesthesia must not drive until the surgical team gives clearance. Many children remain in hospital for several days.

How painful is the repair?

Soreness is expected, especially around the perineal incision. Pain medicine is given during recovery and after discharge. Pain should generally improve rather than become steadily worse.

When will we know whether it worked?

The surgeon can assess the anatomical repair immediately. Healing is reviewed over the following weeks. Long-term bowel control may not become clear until toilet-training age or later.

Will my child need a colostomy?

Not every child does. It is more likely when the rectum is high, the anatomy is complex, or a

primary repair is not considered safe.

Will my child have normal bowel control?

Some children develop good control, while others have constipation or leakage. The result is influenced by the original muscles, nerves, spine, and type of malformation. Ongoing bowel management can improve daily function.

Sources

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