PROCEDURE

Meckel diverticulectomy

Meckel diverticulectomy is surgery to remove an abnormal pouch from the small intestine.

PURPOSE
Remove a harmful Meckel diverticulum and affected bowel

PROCEDURE TYPE
Therapeutic surgery, usually minimally invasive

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
Often 1-3 hours, longer when bowel resection is needed

PREPARATION
Fasting, medication review, and planned blood thinner changes

RECOVERY
Overnight to several days; no driving after anaesthesia

MAIN RISKS
Bleeding, infection, bowel leak, injury to nearby organs

RESULTS
Operative findings immediately; pathology usually within several days

Overview

A Meckel diverticulum is a small pouch attached to the small intestine. It forms before birth and may contain tissue like the lining of the stomach or pancreas.

Meckel diverticulectomy is an operation to remove this pouch. If the base of the pouch or nearby intestine is damaged, the surgeon may remove a short section of small intestine as well. The healthy ends are then joined together. This is called a bowel resection with anastomosis.

The operation is often performed through several small cuts using a camera. This is called laparoscopic or minimally invasive surgery. An open operation through a larger abdominal cut may be safer in an emergency, when the bowel is very swollen, or when more extensive treatment is needed.

Not every Meckel diverticulum needs to be removed. Many are found by chance and never cause a problem.

Why the procedure is performed

Surgery may be recommended when a Meckel diverticulum is causing or is strongly suspected of causing:

Bleeding can occur when stomach-type tissue inside the pouch produces acid. The acid may create an ulcer in the nearby small intestine.

The operation may be planned after testing or performed urgently for bleeding, obstruction, severe inflammation, or perforation.

- Bleeding in the digestive tract
- Inflammation, called Meckel diverticulitis
- A hole in the bowel, called a perforation
- A blocked or twisted small intestine
- Intussusception, where one part of the bowel slides into another
- An abnormal connection to the belly button
- Concern about a growth or tumour

Who should and should not have it

Meckel diverticulectomy is usually considered when a Meckel diverticulum is causing bleeding, inflammation, obstruction, perforation, or another clear complication. It may also be appropriate when the surgeon cannot safely rule out abnormal growth.

Removing a Meckel diverticulum found by chance is more controversial. The decision considers its appearance, your age and overall health, the reason for your original operation, and the added risk of bowel surgery. Leaving it alone may be reasonable when it appears low risk or when removal would add more risk than benefit.

Elective surgery may be delayed if you have an uncontrolled medical condition, an active infection elsewhere, or a medication issue that increases bleeding risk. Pregnancy may also change the timing of non-urgent surgery.

Blood thinners like warfarin or apixaban , heart or lung disease, and previous abdominal operations do not always prevent surgery. They may affect preparation, technique, and

monitoring. In an emergency, the risks of delaying treatment may be greater than the risks of operating.

How to prepare

Your treating facility's own instructions take priority because preparation is tailored to your operation and health.

You will usually need to stop eating and drinking for a set period before general anaesthesia. Ask whether you may take essential morning medicines with a small sip of water.

Give the surgical team a complete list of medicines, supplements, allergies, and previous reactions to anaesthesia. Some medicines that affect bleeding or blood sugar may need adjustment. Do not stop a prescribed blood thinner unless the team responsible for the procedure tells you exactly when and how.

A full bowel preparation is not routinely needed for every diverticulectomy. It may be requested if a larger bowel resection is planned.

Arrange for someone to take you home when you are discharged. Pack for a possible hospital stay, especially if bowel obstruction, bleeding, or inflammation is present.

What happens during the procedure

You receive general anaesthesia, so you are unconscious and do not feel the operation. A breathing tube supports your breathing.

For laparoscopic surgery, the surgeon makes several small abdominal cuts. A camera and narrow instruments are inserted through these openings. The abdomen is gently inflated with carbon dioxide to create working space.

The surgeon examines the small intestine and finds the Meckel diverticulum. A narrow, healthy-looking pouch may be removed at its base with a stapling device.

A wider section may need to be removed when the pouch has a broad base, the nearby bowel is ulcerated or damaged, or there is concern about abnormal tissue. The surgeon then joins the healthy bowel ends together.

Open surgery may be needed from the start or after beginning laparoscopically. Changing to an open operation is a safety decision, not necessarily a complication.

The removed tissue is sent to a laboratory for examination under a microscope. The abdominal cuts are then closed with stitches, staples, surgical glue, or a combination.

Recovery and what to expect afterward

Pain is expected around the cuts and deeper in the abdomen. After laparoscopic surgery, leftover gas may cause temporary bloating or shoulder-tip discomfort. Pain should gradually improve and can usually be managed with the medicines provided.

Eating often starts with sips of fluid and advances as your bowel begins working and you can eat without significant nausea or vomiting. Recovery may take longer after obstruction, perforation, or a bowel resection.

You will be encouraged to sit up and walk soon after surgery. Walking supports bowel function and reduces the risk of blood clots. Avoid heavy lifting and strenuous activity until the surgical team says the abdominal wall has healed enough.

Do not drive home. Do not drive while taking opioid pain medicine, while your movements are limited, or until you can safely make an emergency stop. Follow the specific restriction given by your surgeon and insurer.

Return to work is based on the type of operation and your job. Desk work may be possible within a few weeks after an uncomplicated laparoscopic operation. Open surgery, complications, or work involving lifting usually requires more time.

Risks and possible complications

Possible complications include:

A bowel leak can cause infection inside the abdomen and may require antibiotics like amoxicillin or doxycycline , drainage, or another operation. Your individual risk is affected by whether surgery is planned or urgent, the condition of the bowel, and your general health.

- Bleeding or infection
- Leakage where the bowel was closed or rejoined
- Injury to nearby bowel, blood vessels, or other organs
- Temporary slowing of the bowel, called ileus
- A later blockage caused by internal scar tissue, called adhesions
- Blood clots in the legs or lungs
- Lung, heart, or anaesthesia complications
- An incisional hernia, where tissue pushes through a weakened scar

Results and follow up

The surgeon can usually explain what was found shortly after the operation. Laboratory examination confirms that the removed tissue was a Meckel diverticulum and checks for stomach-type tissue, inflammation, ulceration, or a growth. These results commonly take several days.

Routine follow-up checks your wounds, pain control, eating, bowel function, and return to activity. If pathology finds unexpected abnormal tissue, the team will explain whether further tests or treatment are needed.

Keep follow-up appointments even if recovery is going well. Contact the team sooner if your recovery stops improving.

Alternatives

The realistic alternatives depend on why surgery was offered.

Observation may be reasonable for a Meckel diverticulum found by chance when it appears unlikely to cause harm. This avoids immediate surgical risks but leaves the pouch in place, so a future complication remains possible.

When the diagnosis is uncertain, tests such as a Meckel scan, CT scan, capsule camera, or specialized endoscopy may provide more information. These avoid immediate surgery but can miss a Meckel diverticulum or fail to identify the exact source of bleeding.

Endoscopy or an interventional radiology procedure may sometimes locate or temporarily control active bleeding. These options are less invasive, but the pouch remains and bleeding may return.

Medicines can treat pain, infection, or related symptoms, but they do not remove the diverticulum or reliably correct a bowel blockage, perforation, or repeated bleeding.

For serious obstruction, perforation, or uncontrolled bleeding, observation is generally not a safe substitute for surgery.

When to call your healthcare team

For routine concerns, contact the surgical team during normal hours if pain is not steadily improving, constipation continues despite your discharge plan, or you have questions about food, activity, work, or wound care.

Seek urgent same-day medical advice for:

Call emergency services for severe or rapidly worsening abdominal pain, fainting, heavy bleeding, severe breathing difficulty, chest pain, confusion, or a rigid and markedly swollen abdomen.

- Increasing abdominal pain or swelling
- Repeated vomiting or inability to keep fluids down
- Fever, wound redness, pus, or an opening wound
- New blood in the stool or black, tar-like stool
- Bowel function that stops after it had started returning

Common questions

Will I be asleep?

Yes. Meckel diverticulectomy is performed under general anaesthesia. You are unconscious, and a breathing tube is usually used during the operation.

Can I drive home?

No. Someone else must drive you after discharge. You should not drive while using opioid pain medicine or until you can move comfortably and react safely.

How painful is it?

Abdominal soreness is common, especially when standing, coughing, or changing position. Laparoscopic surgery usually causes less wound pain than open surgery, although internal bowel surgery can still be uncomfortable.

When will I know what the surgeon found?

The surgeon can usually discuss the operative findings soon afterward. The final laboratory report on the removed tissue generally takes several days.

Will I have a large scar?

Laparoscopic surgery usually leaves several small scars. Open surgery leaves a longer abdominal scar. The required approach may change during the operation if that is safer.

Can a Meckel diverticulum come back?

A completely removed Meckel diverticulum does not grow back. However, later abdominal symptoms can have other causes and should be assessed on their own.

Sources

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