PROCEDURE

Total proctocolectomy and ileal-anal pouch

Surgery that removes the colon and rectum and creates an internal pouch connected to the anus.

PURPOSE
Remove colon and rectum while preserving bowel movements through anus

PROCEDURE TYPE
Therapeutic; minimally invasive or open surgery

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
Usually 4-6 hours for each major operation

PREPARATION
Fasting, possible bowel preparation, medication changes, stoma marking

RECOVERY
Several hospital days; no driving while impaired or taking opioids

MAIN RISKS
Leak, bowel obstruction, infection, and pouchitis

RESULTS
Reconstruction assessed immediately; tissue pathology returns within several days

Overview

A total proctocolectomy removes the entire colon and rectum. The surgeon then uses the end of the small intestine, called the ileum, to make an internal pouch. The pouch is connected to the anus so you can pass stool through your usual route.

This reconstruction is called an ileal pouch-anal anastomosis, or IPAA. The pouch is often shaped like the letter J, so it is commonly described as a J-pouch.

The operation may be completed in one, two, or three stages. Many people first receive a temporary loop ileostomy. This brings part of the small intestine through an opening in the abdomen, called a stoma, so stool enters an external bag while the new pouch heals. A later operation closes the ileostomy.

Why the procedure is performed

This surgery may be offered when removing the colon and rectum is necessary but preserving bowel movements through the anus is possible.

Reasons include:

For ulcerative colitis, removing the colon and rectum prevents the disease from returning in those organs. It does not always improve problems outside the bowel, such as certain joint, skin, liver, or eye conditions.

- Ulcerative colitis that is not controlled by medicines
- Severe complications of ulcerative colitis, including major bleeding or a dangerously enlarged colon
- Colon or rectal cancer, or changes that may become cancer
- Familial adenomatous polyposis, an inherited condition causing many precancerous polyps
- Medicine side effects that are serious or unacceptable

Who should and should not have it

An ileal-anal pouch may suit you if your colon and rectum need to be removed, your anal muscles work well, and you want to avoid a permanent external ileostomy.

It is usually not the preferred operation for Crohn's disease because Crohn's can affect the small intestine and pouch. This can lead to fistulas, narrowing, repeated inflammation, or pouch failure. Rare exceptions may be considered by an experienced specialist team.

A pouch may also be unsuitable if you have poor anal muscle control, significant existing stool leakage, or cancer that requires removal of the anus. Serious medical conditions that make major surgery unsafe may favor another approach.

Surgery may be delayed to treat infection, improve nutrition, reduce certain immune-suppressing medicines when safe, or stabilize severe illness. Emergency surgery may instead remove the colon first and leave pouch construction until you have recovered.

Age alone does not decide whether you can have a pouch. Your general health, mobility, continence, priorities, and ability to manage frequent bowel movements are more important.

How to prepare

Your treating facility's own instructions take priority because preparation differs by surgical stage and your health.

You may be asked to:

Do not stop a blood thinner or other prescribed medicine on your own. Tell the team about all medicines, supplements, allergies, previous abdominal operations, smoking, pregnancy, and reactions to anaesthesia.

Your team may discuss nutrition, physical activity, fertility, sexual function, pouch function, and the possibility of a temporary or permanent ileostomy before you consent.

- Stop eating and drinking at a stated time
- Complete bowel preparation, if appropriate
- Adjust diabetes medicines or medicines affecting the immune system
- Change blood-thinning medicine under medical supervision
- Have blood tests, imaging, or an anaesthetic assessment
- Meet a stoma nurse to discuss and mark a possible ileostomy site
- Arrange help at home and transport after discharge

What happens during the procedure

You receive general anaesthesia, so you are unconscious and do not feel the operation.

The surgeon operates through several small cuts using keyhole, or laparoscopic, techniques when suitable. Some operations require one larger abdominal incision. The approach may change during surgery if this is safer.

The colon and rectum are removed. The anal opening and its controlling muscles are preserved. The surgeon folds a section of ileum into a pouch and joins it to the anal canal.

A temporary loop ileostomy is often created to divert stool away from the new connection. Before closing it in a later operation, the team may use imaging or an examination to check that the pouch has healed.

Removed tissue is sent to a laboratory. A pathologist examines it for inflammation, polyps, cancer, and other changes.

Recovery and what to expect afterward

Pain: Abdominal soreness is expected, particularly around the incisions and stoma. Pain relief should allow you to breathe deeply, walk, and rest. Tell the hospital team if pain is not controlled or becomes worse.

Eating: Fluids and food are introduced as your bowel begins working. Appetite may be reduced at first. If you have an ileostomy, you will learn how to monitor its output and drink enough to replace lost fluid and salt.

Activity: Walking soon after surgery helps recovery and lowers the risk of blood clots and chest complications. Avoid heavy lifting until your surgical team says the abdominal wall has healed. Increase activity gradually.

Driving: Do not drive while taking opioid pain medicine, while movement is restricted, or until you can safely perform an emergency stop. Follow your surgeon's and insurer's requirements.

Work: Many people need several weeks away from work. A physically demanding job or another planned operation may require longer.

After ileostomy closure, bowel movements are often frequent and loose. Urgency, nighttime bowel movements, and irritation around the anus may occur while the pouch adapts. Medicines, diet changes, and skin protection can sometimes help. Long-term function differs between people.

Risks and possible complications

Major pelvic and abdominal surgery has risks. Your own risk is affected by your health, diagnosis, medicines, previous operations, and whether surgery is planned or urgent.

Possible complications include:

Some complications can be treated with medicines, drainage, or a smaller procedure. Others require another major operation.

- Bleeding, wound infection, blood clots, or anaesthetic problems
- Leakage where the pouch joins the anus, which may cause pelvic infection
- Scar tissue causing a bowel obstruction
- Dehydration or salt imbalance, especially with a high-output ileostomy
- Narrowing at a surgical connection
- Pouchitis, meaning inflammation inside the pouch

- Cuffitis, meaning inflammation in a small remaining rim of rectal tissue
- Frequent stools, urgency, nighttime leakage, or difficulty emptying
- Injury affecting urinary or sexual function
- Reduced fertility, particularly after pelvic surgery in women
- Pouch failure requiring removal or a permanent ileostomy

Results and follow up

Your surgeon can usually describe the immediate surgical result after the operation. Laboratory examination of removed tissue takes several days or longer, especially if additional testing is needed.

Routine follow-up checks your wounds, hydration, nutrition, stoma or pouch function, and pathology results. If you have a temporary ileostomy, further testing and another operation may be planned before it is closed.

Long-term follow-up remains important. The small area near the anus and the pouch can develop inflammation or, less commonly, abnormal cell changes. The need for pouch examination is based on your original diagnosis, pathology, symptoms, and individual risk.

Alternatives

A permanent end ileostomy is the main surgical alternative. It avoids creating a pelvic pouch and may provide more predictable bowel control, but stool is collected continuously in an external appliance.

For ulcerative colitis, continued medical treatment may delay or avoid surgery if it remains safe and effective. It keeps the colon but may involve ongoing side effects, monitoring, flare-ups, and cancer surveillance.

Removing only the colon and leaving the rectum can be used as the first stage of urgent surgery. It is a shorter initial operation, but the remaining rectum may still become inflamed and requires later surgery or surveillance.

For selected people with familial adenomatous polyposis, removing the colon while connecting the small intestine to the retained rectum may provide simpler bowel function. It leaves rectal tissue at risk of further polyps and cancer, so regular examinations and possible later surgery are required.

A continent ileostomy creates an internal abdominal reservoir emptied with a tube. It avoids wearing a standard external bag but is available in limited centers and has a substantial risk of needing revision surgery.

When to call your healthcare team

Contact your surgical team promptly for increasing abdominal or pelvic pain, repeated vomiting, fever, worsening abdominal swelling, new wound redness or drainage, or difficulty keeping fluids down.

If you have an ileostomy, seek prompt advice for no output with cramps or vomiting, suddenly very high watery output, marked thirst, reduced urination, dizziness, or unusual weakness. These may indicate blockage or dehydration.

After pouch surgery, new frequent watery stools, urgency, bleeding, fever, or pelvic pain should be assessed. These can occur with pouch inflammation or another complication and are not simply part of routine adaptation.

Call emergency services for severe breathing difficulty, chest pain, fainting, heavy bleeding, confusion, or other rapidly worsening symptoms.

Questions about diet, expected stool frequency, mild skin irritation, supplies, return to work, or routine test results can usually wait for normal clinic hours.

Common questions

Will I be asleep for J-pouch surgery?

Yes. The operation is performed under general anaesthesia, so you are unconscious throughout it.

Can I drive home after surgery?

No. You will remain in hospital for several days and need someone to take you home. Do not resume driving until you can move comfortably, brake safely, and are no longer impaired by pain medicine.

How painful is the operation?

Abdominal soreness and discomfort around a stoma are expected. Pain medicine is provided and adjusted to help you walk, breathe deeply, and sleep. Increasing pain rather than gradual improvement needs assessment.

Will I need a permanent bag?

Many people have a temporary ileostomy while the pouch heals. A permanent ileostomy may be recommended from the start or become necessary if the pouch cannot be created, does not function well, or develops serious complications.

How often will I go to the toilet afterward?

Bowel movements are usually frequent and loose after ileostomy closure, including at night. Frequency often improves as the pouch adapts, but it does not usually become the same as having a colon.

When will I know the results?

Your surgeon can discuss the operation afterward. The full pathology report is usually available within several days or longer if special tests are required.

Sources

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