CONDITION

Gastrointestinal fistula

A gastrointestinal fistula is an abnormal passage connecting the digestive tract to another organ, the skin, or another part of the bowel.

WHAT IT IS
Abnormal passage from the digestive tract

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Abnormal drainage, abdominal pain, fever, diarrhea

WHAT CAUSES IT
Usually surgery, inflammation, infection, cancer, radiation, or injury

HOW IT IS DIAGNOSED
Contrast CT, endoscopy, or specialised fistula imaging

MAIN TREATMENT
Nutrition, infection control, wound care, and closure procedures

CAN IT BE CURED?
Sometimes - closure or surgery can repair it

IS IT AN EMERGENCY?
Sometimes - confusion, fainting, or heavy bleeding

LONG-TERM OUTLOOK
Many heal, but complex fistulas can persist or return

Overview

A gastrointestinal fistula is an abnormal passage leading from the digestive tract. It may connect two parts of the bowel, or connect the bowel to another organ or the skin.

A fistula that reaches the skin is called an enterocutaneous fistula . Digestive fluid or bowel contents may drain through an opening, often in or near a surgical wound. Internal fistulas may connect the bowel to the bladder, vagina, stomach, or another section of bowel.

The effects depend on where the fistula begins, where it leads, and how much fluid passes through it. Some small fistulas close with supportive care. Others remain open because of inflammation, infection, scar tissue, cancer, or a blockage farther along the bowel.

A fistula matters because digestive fluid contains water, salts, and enzymes that help break

down food. Losing large amounts can cause dehydration, poor nutrition, and skin damage. Bacteria from the bowel can also cause an abscess, which is a pocket of infection, or a more widespread infection.

Symptoms

Symptoms differ greatly between external and internal fistulas.

A fistula leading to the skin may cause:

An internal fistula may be less visible. A connection between two parts of the bowel can cause diarrhea, abdominal discomfort, poor absorption of nutrients, or weight loss. Some internal fistulas cause few symptoms and are found during imaging for another problem.

A bowel-to-bladder fistula can allow gas or stool to appear in the urine. It may also cause repeated urinary infections. A bowel-to-vagina fistula can cause gas, mucus, or stool to pass through the vagina.

An anal fistula usually causes pain, swelling, or ongoing drainage near the anus. It often develops after an anal abscess.

These symptoms can have other causes. Tests are needed to determine whether a fistula is present and where it goes.

- Fluid, mucus, pus, or bowel contents draining from an opening
- Irritated, painful, or broken skin around the opening
- A surgical wound that does not heal as expected
- Diarrhea, abdominal pain, bloating, nausea, or reduced appetite
- Thirst, weakness, dizziness, weight loss, or reduced urination

Causes and risk factors

Abdominal or pelvic surgery is a common setting for an enterocutaneous fistula. It can develop when the bowel does not heal fully, a join between bowel sections leaks, or infection affects nearby tissue. It may appear soon after surgery or later during recovery.

Crohn's disease can cause fistulas because long-term inflammation may extend through the full thickness of the bowel wall. Crohn's-related fistulas can connect bowel loops or reach the skin, bladder, vagina, or area around the anus.

Other possible causes include:

Certain features make natural closure less likely. These include an active infection, a blocked bowel, ongoing Crohn's inflammation, cancer, radiation damage, or a wide and complex fistula tract. A fistula may also stay open if a large amount of digestive fluid passes through it.

- Diverticulitis, in which small pouches in the colon become inflamed
- An abdominal abscess or severe infection
- Cancer involving the bowel or nearby tissues
- Radiation treatment to the abdomen or pelvis
- An injury, including a penetrating injury
- Reduced blood flow to an area of bowel
- Swallowing a foreign object that damages the digestive tract

Diagnosis

Assessment starts with your symptoms, medical history, previous operations, and an examination. If fluid is draining through the skin, its appearance and daily amount can help show which part of the digestive tract may be involved.

Blood tests do not confirm a fistula, but they can identify its effects. Tests may check for infection, anemia, kidney function, dehydration, altered salt levels, and signs of poor nutrition.

A CT scan is commonly used to locate the fistula and look for an abscess, obstruction, inflammation, or leakage. Contrast material may be given by mouth, into a vein, through the rectum, or through an external opening, depending on the situation.

Other tests may include:

No single test suits every fistula. More than one type of imaging may be needed to map a complex tract before treatment.

- A fistulogram, in which contrast is placed into an external opening before X-rays
- MRI, especially for complex pelvic or anal fistulas
- Endoscopy, using a flexible camera to examine the bowel
- Ultrasound for some anal, pelvic, or abdominal fistulas

Treatment and management

Treatment aims to control infection, replace fluid and nutrients, protect the skin, treat the

underlying cause, and close the fistula when possible.

An abscess may need drainage. Antibiotics like amoxicillin or doxycycline may be used when there is a bacterial infection, but they do not close a fistula by themselves. Severe infection or major fluid loss may require hospital care.

Fluid and salt losses must be replaced. Blood tests and the amount of fistula drainage help guide this care. High-output fistulas, which release larger amounts of fluid, usually need closer monitoring.

Nutrition is a central part of treatment. When the digestive tract can still be used safely, nutrition may be given by mouth or through a feeding tube. If this is not possible or does not provide enough nutrition, nutrients may be delivered into a vein. This is called parenteral nutrition .

For a fistula opening onto the skin, wound and stoma specialists can help contain drainage and protect nearby skin. Pouches, barriers, and dressings may be used. This care can reduce pain, leakage, and skin breakdown while the fistula heals or further treatment is planned.

Some fistulas close without an operation once infection, inflammation, nutrition, and any blockage have been addressed. Medicines may sometimes reduce digestive secretions or treat an underlying condition such as Crohn's disease. The choice depends on the type and cause of the fistula.

Endoscopic procedures can close selected fistulas using clips, plugs, stents, or other techniques passed through a flexible camera. These methods are not suitable for every tract.

Surgery may be considered when a fistula does not close, causes repeated infection or major fluid loss, is linked to a blockage or damaged bowel, or develops because of cancer or radiation injury. Surgery usually involves removing or repairing the affected bowel and closing the abnormal connection. When possible, it may be delayed until infection has settled and nutrition has improved.

Complications

Possible complications include dehydration, changes in blood salt levels, kidney problems, weight loss, and loss of muscle. Poor nutrition can slow healing and make infection harder to recover from.

Digestive fluid can cause severe irritation when it remains on the skin. Repeated leakage may also affect sleep, movement, clothing, and confidence.

An abscess or infection can develop around the fistula. In some cases, infection leads to sepsis

, a dangerous whole-body response that can affect blood pressure and organ function.

A fistula can return after it closes, particularly when the underlying inflammation, obstruction, cancer, or tissue damage remains active.

Prevention

Not every gastrointestinal fistula can be prevented. Some occur despite careful surgery and appropriate treatment. Fistulas caused by cancer, radiation damage, severe injury, or unavoidable bowel inflammation may not be preventable.

Good control of Crohn's disease may reduce ongoing bowel damage and some fistula-related complications. Keeping planned follow-up after abdominal surgery can help a care team identify infection, leakage, or wound problems early.

If you smoke and have Crohn's disease, stopping can reduce the risk of a more severe disease course. Support from a smoking-cessation service may make this easier.

Living with it and what to expect

Recovery can take weeks or months. Early care often focuses on stabilising fluid levels, treating infection, improving nutrition, and controlling drainage. Closure may not be attempted immediately if the surrounding tissue is inflamed or if your body needs time to recover.

Some postoperative fistulas close with supportive treatment. Complex fistulas, high-output fistulas, and those linked to Crohn's disease, cancer, radiation damage, or bowel obstruction are more likely to need a procedure or surgery. Even after closure, follow-up may continue because a fistula can recur.

At home, you may need to record drainage, care for the skin, and watch for changes in urine output, weight, temperature, or symptoms. A dietitian can help if eating is difficult or if you need extra nutrition. A wound or stoma nurse can help find practical ways to manage leakage and protect the skin.

Living with drainage or a collection pouch can affect work, travel, relationships, and body image. It is reasonable to ask for help with supplies, workplace adjustments, mental health, or daily care. Many people return to their usual activities after healing, although the outcome is shaped by the fistula's cause and complexity.

When to get medical help

Seek emergency help for signs of severe infection, bleeding, or dehydration, including:

Contact your healthcare team promptly if you develop a fever, increasing pain, new swelling, pus, a strong change in drainage, repeated vomiting, or worsening redness around the opening. A sudden increase or decrease in fistula output also needs assessment because it may reflect a change in the tract or a blockage.

Routine follow-up is important even when you feel stable. It is used to monitor nutrition, fluid balance, skin health, the underlying condition, and whether the fistula is closing.

- Confusion, fainting, extreme drowsiness, or difficulty staying awake
- Trouble breathing, cold or blotchy skin, or rapidly worsening weakness
- Heavy bleeding from the fistula, rectum, vomit, urine, or vagina
- Severe or rapidly worsening abdominal pain
- Very little urine, especially with dizziness or inability to drink

Common questions

Can a gastrointestinal fistula heal on its own?

Some do, especially straightforward fistulas that develop after surgery and have no active infection, blockage, cancer, or continuing inflammation. Others require endoscopic treatment or surgery. Healing is less likely when the tract is complex or produces a large amount of fluid.

How long does a fistula take to close?

There is no single timetable. Supportive treatment and observation may continue for weeks or months. The location, amount of drainage, nutritional health, infection, and underlying cause all affect how quickly closure may occur.

Can I eat normally with a gastrointestinal fistula?

Some people can eat and drink, sometimes with adjustments. Others need tube feeding or nutrition through a vein because eating increases output, the bowel cannot be used safely, or nutrition needs are not being met. The plan should be based on the fistula's location and your nutritional needs.

Does every fistula need surgery?

No. Some close with infection control, nutrition, wound care, and treatment of the underlying cause. Surgery is more likely when the fistula persists, causes serious complications, or is associated with obstruction, damaged bowel, cancer, or uncontrolled inflammation.

Is a gastrointestinal fistula cancer?

A fistula is not itself cancer. However, cancer can occasionally cause a fistula by growing into nearby tissues. Imaging, endoscopy, or tissue sampling may be used when cancer is a concern.

Can a fistula come back after treatment?

Yes. Recurrence is possible, especially if Crohn's inflammation, infection, obstruction, cancer, or radiation-related tissue damage remains. Follow-up helps identify and manage these problems.

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