CONDITION

Esophageal perforation

An esophageal perforation is a hole through the wall of the tube that carries food from your mouth to your stomach.

WHAT IT IS
Full-thickness tear in the esophagus

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Sudden chest pain, painful swallowing, breathlessness, fever

WHAT CAUSES IT
Medical procedures, forceful vomiting, injury, swallowed objects

HOW IT IS DIAGNOSED
Contrast CT scan or contrast esophagram

MAIN TREATMENT
Antibiotics, leak closure, drainage, and nutritional support

CAN IT BE CURED?
Yes - treatment can close the tear

IS IT AN EMERGENCY?
Yes - any suspected tear needs immediate care

LONG-TERM OUTLOOK
Often good with early, effective treatment

Overview

An esophageal perforation is a hole through the full thickness of the esophagus, the muscular tube that carries food and liquids from your mouth to your stomach.

The hole allows saliva, food, stomach contents, and bacteria to leak into the neck, chest, or abdomen. This can cause severe inflammation and infection, including infection of the mediastinum, the central space between the lungs.

Esophageal perforation is a medical emergency. Early treatment helps control leakage and infection and gives the esophagus the best chance to heal. Treatment depends on the hole's location, size, cause, and duration, as well as whether contamination has spread.

It is different from a Mallory-Weiss tear, which affects the inner lining and usually causes

bleeding after vomiting. A perforation passes through the entire wall.

Symptoms

Symptoms may begin suddenly, sometimes after severe vomiting, an endoscopy, swallowing a sharp object, or an injury.

Possible symptoms include:

The crackling, called subcutaneous emphysema, is caused by trapped air. It may be absent, especially early on.

A neck perforation may cause neck pain, stiffness, swelling, or trouble swallowing. A chest perforation often causes chest or upper-back pain and breathing problems. A tear near the stomach may cause upper abdominal pain.

Not everyone has the classic combination of vomiting, chest pain, and trapped air. Symptoms can resemble a heart attack, collapsed lung, pneumonia, or another emergency.

- Sudden, severe pain in the chest, neck, upper abdomen, or back
- Pain or difficulty when swallowing
- Shortness of breath or rapid breathing
- Fever, chills, sweating, or feeling very unwell
- A rapid heartbeat
- Vomiting, sometimes with blood
- A hoarse voice or neck swelling
- A crackling feeling under the skin of the neck or chest

Causes and risk factors

Medical procedures are an important cause. A tear can occur during an upper endoscopy, particularly when stretching a narrowed area, removing an object, treating a growth, or placing an instrument or tube. This complication is uncommon.

A spontaneous rupture caused by a sudden rise in pressure inside the esophagus is called Boerhaave syndrome. It most often follows forceful or repeated vomiting but can occur after severe retching, coughing, straining, childbirth, or a similar pressure increase.

Other causes include:

An esophagus that is narrowed, inflamed, scarred, or affected by cancer may be more vulnerable. Related conditions include severe acid reflux and eosinophilic esophagitis. Having a risk factor does not mean a perforation will happen.

- Swallowing a sharp object, bone, battery, or other foreign body
- Caustic chemical injury
- A blow, penetrating injury, or operation involving the neck or chest
- Esophageal cancer or severe inflammation
- Pressure damage from a tube or device
- Rarely, an unexplained spontaneous tear

Diagnosis

Suspected esophageal perforation requires urgent hospital assessment. The medical team will ask about recent vomiting, procedures, injuries, swallowed objects, and esophageal conditions.

A CT scan of the neck, chest, or abdomen is commonly used. Contrast may be given through a vein and sometimes swallowed. CT can show air or fluid outside the esophagus, inflammation, infected collections, and contrast leaking through a hole.

A contrast esophagram is an X-ray taken while you swallow a visible liquid. Leakage can confirm the perforation. Small or contained leaks may not appear initially, so further testing may be needed if suspicion remains high.

Endoscopy lets a specialist inspect the esophagus and may allow treatment at the same time. It is used selectively because air and instruments can sometimes enlarge a tear or spread contamination.

Blood tests can show infection, inflammation, dehydration, or organ problems but cannot confirm a perforation. Heart tests or other imaging may be needed to rule out similar emergencies.

Treatment and management

Treatment begins in hospital. You will usually be told not to eat or drink so less material passes through the damaged area. Fluids, antibiotics like amoxicillin or doxycycline , pain relief, and other medicines may be given through a vein. Nutrition may be provided through a feeding tube positioned beyond the leak or directly into a vein.

The main goals are to:

Some small, contained perforations can be managed without surgery when the leak is limited, the person is stable, and close specialist monitoring is available. Treatment may include antibiotics, drainage, nutritional support, and repeated imaging.

Endoscopic options include clips, suturing devices, removable stents, or endoscopic vacuum therapy. A stent covers the damaged area. Vacuum therapy uses a small sponge and gentle suction to remove fluid and encourage healing.

Surgery may be needed for a large or uncontained leak, widespread contamination, damaged tissue, severe infection, or a leak that cannot otherwise be controlled. Surgery may close the hole, reinforce it with nearby healthy tissue, and wash out and drain infected spaces.

Part of the esophagus may need to be removed if tissue is badly damaged or affected by a serious condition such as advanced cancer.

Follow-up imaging may confirm that the leak has closed before eating and drinking restart. Food is reintroduced gradually under the hospital team's direction.

- Stop ongoing leakage
- Control infection
- Drain contaminated fluid
- Support nutrition during healing
- Treat the cause

Complications

The main danger is contamination around the esophagus. In the chest, this may cause mediastinitis, a severe infection and inflammation between the lungs.

Other complications include:

Esophageal perforation can be fatal, especially when diagnosis and infection control are delayed or the person is already seriously ill. Prompt treatment improves the chance of recovery but cannot guarantee an outcome.

- Sepsis
- Pneumonia or breathing failure
- Infected fluid or pus around a lung
- A collapsed lung

- Bleeding
- Abnormal passages between nearby structures
- Scar-related narrowing
- Ongoing swallowing problems
- Failure of the leak to close

Prevention

Not every perforation can be prevented. Spontaneous tears and injuries related to underlying disease may occur without warning.

During endoscopy or surgery, healthcare teams use careful techniques and assess risk factors. When possible, the benefits and risks of procedures such as stretching a narrowed esophagus should be discussed beforehand.

Do not deliberately induce vomiting. Seek medical advice for repeated vomiting, ongoing difficulty swallowing, or food that regularly feels stuck.

Keep button batteries, sharp objects, and caustic products away from children. Do not try to push down a stuck object by swallowing more food. A swallowed battery, sharp object, or object causing breathing or swallowing difficulty needs urgent assessment.

Living with it and what to expect

Recovery may require days or weeks in hospital, depending on the leak, infection, treatment, and general health. Some people need intensive care, multiple procedures, or a temporary feeding tube.

The esophagus needs time to seal before normal eating resumes. After imaging confirms healing, liquids and foods may be introduced in stages. Swallowing can feel different at first, particularly after surgery or stent treatment.

Many people eventually return to their usual diet and activities. Others develop longer-term swallowing difficulty, reflux, discomfort, or scar-related narrowing. Narrowing may require further endoscopic treatment. Major surgery can lead to longer-term dietary changes and monitoring.

Follow-up may include symptom reviews, imaging, or endoscopy. A removable stent must be checked and removed or replaced as planned. Underlying inflammation, reflux, narrowing, or

cancer may need separate care.

Fear of eating or of the problem returning is understandable. Tell your follow-up team if anxiety makes it difficult to eat, sleep, or resume usual activities.

When to get medical help

Get emergency medical help now for sudden severe chest, neck, back, or upper abdominal pain, especially after forceful vomiting, an endoscopy, an injury, or swallowing an object. New breathlessness, fever, rapid worsening, faintness, confusion, neck swelling, or crackling under the skin also requires emergency assessment.

Do not eat or drink while waiting for emergency assessment if a perforation is suspected. Do not make yourself vomit or try to remove a swallowed object yourself.

During recovery, seek urgent help for increasing pain, fever, shortness of breath, repeated vomiting, new swelling, inability to swallow saliva, or fluid leaking from a wound or drain.

Routine follow-up can address gradually improving swallowing discomfort, diet changes, feeding-tube care, or returning to work and exercise. Keep appointments even if you feel better because imaging or stent removal may still be needed.

Common questions

Can an esophageal perforation heal on its own?

Some small, contained leaks heal without surgery, but they still require hospital treatment and close monitoring. Antibiotics, drainage, nutritional support, or endoscopic treatment may be needed. Do not wait at home for a suspected perforation to heal.

Can you survive an esophageal perforation?

Yes. Many people recover, especially when the leak is identified and controlled early. The outlook depends on the tear's location and cause, the spread of contamination, other health conditions, and how quickly treatment begins.

How long does recovery take?

Recovery varies. A contained leak may heal relatively quickly, while major surgery or widespread infection can require weeks in hospital and months of recovery. Eating normally, rebuilding strength, and returning to work may happen at different times.

Will I be able to eat normally again?

Many people return to a normal or near-normal diet. Eating usually restarts gradually after testing shows the leak has closed. Scar-related narrowing, major surgery, or an underlying condition may require dietary changes or further treatment.

Is an esophageal perforation the same as a ruptured esophagus?

Usually, yes. Both terms describe a hole through the esophageal wall. Boerhaave syndrome is a spontaneous rupture caused by a sudden pressure increase, usually after forceful vomiting.

Can an esophageal perforation cause cancer?

The perforation itself does not cause cancer. However, esophageal cancer can weaken the wall and contribute to a perforation. Testing may be needed to identify the cause.

Sources

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