CONDITION

Esophageal atresia

Esophageal atresia is a birth difference in which the tube carrying food to the stomach does not form as one continuous passage.

WHAT IT IS
A birth difference leaving the esophagus disconnected

BODY SYSTEM
Digestive and breathing systems

MAIN SYMPTOMS
Drooling, choking with feeds, coughing, blue skin

WHAT CAUSES IT
Development before birth, usually for unknown reasons

HOW IT IS DIAGNOSED
Feeding-tube test and chest or abdominal X-ray

MAIN TREATMENT
Surgical repair with newborn intensive care

CAN IT BE CURED?
Sometimes - surgery reconnects the swallowing pathway

IS IT AN EMERGENCY?
Yes - a newborn cannot swallow safely

LONG-TERM OUTLOOK
Most survive, but swallowing or breathing problems may continue

Overview

Esophageal atresia is a condition present at birth. The esophagus-the tube carrying food and liquid from the mouth to the stomach-ends in a closed pouch instead of forming one continuous passage.

Many affected babies also have a tracheoesophageal fistula, or TEF. This is an abnormal connection between the esophagus and the trachea, or windpipe. Air may enter the stomach, while saliva or stomach contents may enter the lungs.

A baby with esophageal atresia cannot swallow milk safely. Saliva and feeds may collect in the upper pouch or enter the airway, causing choking and breathing problems. The condition needs urgent care and is usually treated with surgery.

Surgery can restore a route to the stomach, but the repaired esophagus may not move food normally. Some people continue to have swallowing, reflux, feeding, or breathing problems and need long-term follow-up.

Symptoms

Symptoms usually appear soon after birth, particularly when feeding begins. A newborn may have:

Staff may also be unable to pass a feeding tube into the stomach.

Before birth, an ultrasound may show too much amniotic fluid, called polyhydramnios, because the baby cannot swallow normally. The stomach may look small or not be visible. These findings can suggest esophageal atresia but do not confirm it.

A fistula without atresia may cause subtler symptoms, including repeated coughing during feeds, poor weight gain, or recurring chest infections.

- Frequent drooling or bubbly saliva
- Coughing, choking, or gagging during feeds
- Breathing difficulty or noisy breathing
- Blue or grey skin during feeding
- Milk returning through the mouth or nose
- A swollen abdomen, especially if a fistula lets air enter the stomach

Causes and risk factors

Esophageal atresia develops early in pregnancy while the esophagus and windpipe are forming. In most cases, the reason this process changes is unknown. It is not caused by something a parent did during pregnancy.

Most cases occur without a family history. Occasionally, the condition is part of a genetic syndrome or chromosome condition.

Some babies have differences involving the heart, spine, kidneys, anus, arms, or legs. A group of associated birth differences is sometimes described by the initials VACTERL. Having one does not mean a baby has all of them.

The chance of esophageal atresia in a future pregnancy is usually low but may be higher with an identified genetic condition or family history. A genetics professional can assess an

individual family's circumstances.

Diagnosis

After birth, esophageal atresia is usually suspected from symptoms or when a soft feeding tube cannot reach the stomach. An X-ray may show the tube curled in the upper esophageal pouch. Air in the stomach or intestines can suggest a fistula between the lower esophagus and windpipe.

Prenatal ultrasound findings may lead the team to investigate before feeding, but tests after birth are needed to confirm the anatomy.

Bronchoscopy, which uses a small camera to examine the windpipe, may help locate a fistula and plan surgery. Tests depend on the baby's condition and suspected type of connection.

Because other birth differences can occur, assessment commonly includes a heart ultrasound, or echocardiogram. The kidneys, spine, limbs, and anus may also be examined. Genetic testing may be offered if physical findings or family history suggest a syndrome or chromosome condition.

Treatment and management

A newborn with suspected esophageal atresia is not fed by mouth. A tube placed in the upper pouch gently removes saliva so it does not overflow into the airway. The baby receives fluids and support through a vein while surgery is planned. Breathing support may be needed.

Surgery usually closes any connection with the windpipe and joins the ends of the esophagus. Timing and technique depend on the baby's stability, anatomy, and other health concerns.

If the gap is too long for the ends to be joined safely, the condition is called long-gap esophageal atresia. Management may involve waiting for growth, gradually bringing the ends together, or using part of the stomach or intestine to create a swallowing passage. A specialist children's surgical centre usually coordinates care.

After surgery, feeding begins according to recovery and the surgeon's assessment. Some babies temporarily receive milk through a tube into the stomach or intestine. Feeding and swallowing specialists can support sucking, texture changes, and safe swallowing.

Long-term management may include treatment for acid reflux, stretching a narrowed area, nutrition support, or respiratory care. Needing these treatments does not necessarily mean the repair has failed.

Complications

Early complications may include leakage where the esophagus was joined, infection, or narrowing during healing. A narrowed area, called a stricture, can make swallowing difficult but can often be widened during an endoscopy.

A fistula can occasionally reopen or be discovered later. Warning signs include coughing with drinks, repeated chest infections, or worsening breathing problems.

Long-term concerns can include:

Not every child develops these problems. Some appear only when solid foods are introduced or eating demands change. Follow-up helps identify concerns before they affect nutrition, breathing, or daily life.

- Difficulty moving food through the esophagus
- Food sticking at the repair site
- Gastroesophageal reflux
- Inflammation or damage to the esophageal lining
- Feeding aversion or anxiety around eating
- Poor weight gain or nutritional difficulties
- Tracheomalacia, in which a softer windpipe may partly collapse
- Persistent cough, wheezing, or repeated respiratory infections

Prevention

Esophageal atresia cannot usually be prevented. It forms early in pregnancy, and most cases have no known cause.

If it is linked to an identified genetic or chromosome difference, genetic counselling can explain what this may mean for the child and future pregnancies. Prenatal testing can sometimes detect a known family condition, but it cannot prevent esophageal atresia.

Living with it and what to expect

The first weeks or months often focus on surgery, healing, and safe feeding. Hospital stays may be longer if the baby was born early, has long-gap atresia, or has other medical concerns.

Many children eventually eat by mouth, attend school, play, and take part in ordinary activities. Eating may require extra time and attention. Some need smaller bites, careful chewing, drinks with meals, or modified food textures. These strategies should follow advice from the care team, especially when swallowing safety is uncertain.

Reflux, swallowing difficulty, or respiratory symptoms can continue or return. A child who manages soft foods may struggle when meat, bread, or other dense solids are introduced. Growth and nutrition should be reviewed alongside symptoms.

Follow-up may involve surgical, digestive, respiratory, nutrition, and feeding specialists. Priorities change with age, from feeding and breathing in infancy to reflux, food sticking, growth, independent eating, and comfort around meals.

Adults born with esophageal atresia may also experience swallowing or reflux problems. Continuing care is useful because childhood surgery does not always end the need for follow-up.

When to get medical help

Before repair, esophageal atresia is an emergency because a newborn cannot swallow safely. A newborn who repeatedly chokes, turns blue or grey, has excessive bubbly saliva, or struggles to breathe needs immediate medical assessment. Do not continue feeding while waiting for help.

After repair, call emergency services if a child:

Seek urgent medical advice for food that seems stuck, repeated vomiting, worsening breathing, a swollen abdomen, dehydration signs, or fever with cough and breathing symptoms. Follow any established emergency plan.

Contact the usual care team promptly if swallowing becomes more difficult, coughing during meals increases, feeds take much longer, or weight gain slows. These symptoms may indicate narrowing, reflux, poor esophageal movement, or another swallowing problem.

At routine follow-up, mention ongoing heartburn, nighttime cough, frequent chest infections, food avoidance, or anxiety around eating. These concerns can affect nutrition, sleep, and quality of life.

- Is blue, grey, unresponsive, or having severe difficulty breathing
- Is choking and cannot breathe or make a sound
- Suddenly cannot swallow saliva or appears to have a complete food blockage

Common questions

Is esophageal atresia the same as a tracheoesophageal fistula?

No. Esophageal atresia means the esophagus does not form a continuous tube. A tracheoesophageal fistula is an abnormal connection between the esophagus and windpipe. They often occur together but are distinct problems.

Can a baby eat normally after esophageal atresia surgery?

Many children eventually eat a broad range of foods by mouth. Some need temporary tube feeding, modified textures, feeding therapy, or treatment for narrowing and reflux. Eating skills may develop gradually, especially after delayed repair or a long hospital stay.

Is esophageal atresia inherited?

Usually not. Most families have no history of the condition, and no single cause is found. In a minority of cases, it occurs with a genetic syndrome or chromosome difference. Genetic counselling can provide an individual assessment.

Can esophageal atresia be seen on an ultrasound before birth?

Sometimes. Too much amniotic fluid or a small or unseen stomach may raise suspicion. Ultrasound does not detect every case or usually confirm the exact anatomy. Diagnosis is generally confirmed after birth using a feeding tube and X-ray.

Does surgery completely fix esophageal atresia?

Surgery repairs the gap and usually closes a fistula, but the esophagus may not work like one that formed normally. Movement problems, narrowing, reflux, feeding difficulties, or breathing symptoms can continue, so follow-up remains important.

Will my child need another operation?

Some children do, although many later problems can be managed without open surgery. Procedures may be needed to widen a stricture, treat a recurrent fistula, or address severe reflux or airway problems. Decisions depend on symptoms, growth, test results, and the original anatomy.

Sources

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