CONDITION

Epiglottitis

Epiglottitis is sudden swelling around the entrance to the windpipe that can block breathing.

WHAT IT IS
Sudden inflammation and swelling above the windpipe

BODY SYSTEM
Throat and breathing system

MAIN SYMPTOMS
Severe sore throat, painful swallowing, drooling, difficult breathing

WHAT CAUSES IT
Usually bacterial infection; rarely throat injury

HOW IT IS DIAGNOSED
Controlled airway examination with flexible laryngoscopy

MAIN TREATMENT
Airway support and intravenous antibiotics

CAN IT BE CURED?
Yes - treatment usually clears inflammation

IS IT AN EMERGENCY?
Yes - breathing can become blocked quickly

LONG-TERM OUTLOOK
Most recover fully after prompt treatment

Overview

Epiglottitis is inflammation and swelling of the epiglottis and nearby tissues. The epiglottis is a small flap at the base of the tongue. It helps cover the windpipe when you swallow, keeping food and liquid out of the lungs.

Swelling in this area can narrow or block the airway. For that reason, suspected epiglottitis is treated as a medical emergency, even if breathing is not yet severely affected.

Epiglottitis can occur at any age. It was once seen mainly in young children because of infection with Haemophilus influenzae type b, often called Hib. Routine Hib vaccination has made this cause much less common in vaccinated children. Epiglottitis now occurs more often in adults than it once did, and several types of bacteria can cause it.

The condition is not the same as croup. Croup usually causes a barking cough and hoarse voice, often after cold symptoms. Epiglottitis more often causes severe throat pain, difficulty swallowing, drooling, or quiet, strained breathing. A cough may be absent.

Symptoms

Symptoms may begin quickly, especially in children. In adults, they may develop over a day or several days, although rapid worsening is possible.

Common symptoms include:

A child may appear anxious, very still, or unwilling to lie down. They may hold their mouth open and extend their neck. Crying, struggling, or being laid flat can make breathing harder.

Adults may initially have throat pain and painful swallowing without obvious breathing difficulty. A feeling that the throat is closing, increasing breathlessness, stridor, or trouble handling saliva suggests more serious airway narrowing.

Do not try to look deeply into the throat or press down the tongue if epiglottitis is suspected. This can cause distress and may worsen airway obstruction, particularly in a child.

- Severe sore throat, sometimes despite a fairly normal-looking mouth
- Pain or difficulty when swallowing
- Drooling or spitting because swallowing is too painful
- A muffled or unusually quiet voice
- Fever
- Noisy, high-pitched breathing called stridor
- Shortness of breath or rapid breathing
- Sitting upright or leaning forward to breathe more easily

Causes and risk factors

Most cases are caused by a bacterial infection. Possible bacteria include Hib, other types of Haemophilus influenzae , streptococci, and staphylococci. In many cases, the exact organism is not identified.

Hib spreads through respiratory droplets and contact with secretions from the nose or throat. Other bacteria that cause epiglottitis may also live in the upper airway before causing an

infection.

Less commonly, similar swelling can follow direct injury. Examples include burns from very hot liquid or steam, swallowing a caustic chemical, or trauma to the throat. These injuries are serious even when infection is not involved.

Factors associated with a higher risk include:

Vaccinated people can still develop epiglottitis because Hib is not its only cause. Having a risk factor does not mean that someone will develop the condition.

- Not having received recommended Hib vaccination
- A weakened immune system
- Diabetes
- Conditions or treatments that reduce the ability to fight infection

Diagnosis

Keeping the airway open takes priority over confirming the diagnosis. Assessment is usually done in a hospital where specialists can support breathing immediately if needed.

A clinician may suspect epiglottitis from the symptoms, breathing pattern, voice, and posture. Oxygen levels and other vital signs are monitored, but a normal oxygen reading does not always rule out significant swelling.

The airway may be examined with flexible laryngoscopy. This uses a thin, flexible camera passed through the nose to view the epiglottis and surrounding structures. It is performed in a controlled setting, particularly when breathing may be unstable.

A side-view neck X-ray can sometimes show an enlarged epiglottis, known as the "thumb sign." Imaging is considered only when the person is stable. It should not delay airway treatment, and a normal X-ray does not always exclude the condition.

Blood cultures may help identify bacteria in the bloodstream. Samples from the swollen area may be collected after the airway is secure. Other blood tests can assess infection and its effects, but no blood test alone confirms epiglottitis.

Treatment and management

Treatment takes place in hospital. Care commonly involves ear, nose and throat specialists, anaesthesia or airway specialists, and critical care staff.

The immediate goal is to keep the airway open. Oxygen may be given while the person is kept upright and as calm as possible. Repeated throat examination, unnecessary procedures, and lying flat are avoided when they could worsen breathing.

Some people can breathe safely while being watched closely in an intensive care setting. Others need a breathing tube passed into the windpipe. Because swelling can make this difficult, the procedure is performed by an experienced airway team with emergency equipment available.

If a breathing tube cannot be placed through the mouth or nose, an emergency opening may be made through the front of the neck. This is uncommon but can be lifesaving.

Antibiotics like amoxicillin or doxycycline are usually given through a vein to cover the bacteria most likely to be responsible. Treatment may be adjusted if test results identify a specific organism. Once swelling and swallowing improve, treatment may be changed to medicine taken by mouth.

Corticosteroids like prednisone or hydrocortisone , which reduce inflammation, may sometimes be used. Their role is not as clearly established as airway support and antibiotics, so they are not used in exactly the same way for everyone.

Fluids, pain relief, and fever treatment may also be provided. Food and drink are generally avoided until swallowing is considered safe.

Complications

The main complication is airway obstruction. Severe swelling can prevent air from reaching the lungs and may lead to respiratory arrest if it is not treated promptly.

Infection can sometimes spread into the bloodstream, causing sepsis. Sepsis is a harmful whole-body response to infection. Pneumonia and infection in nearby neck tissues are other possible complications.

Low oxygen levels can damage organs if the airway remains blocked. Complications related to emergency airway procedures can also occur, although these procedures may be essential.

Most people treated before prolonged airway obstruction recover without permanent damage. The risk of serious complications is higher when treatment is delayed or when swelling progresses very rapidly.

Prevention

Not every case of epiglottitis can be prevented.

Hib vaccination is the main way to prevent epiglottitis caused by Hib. Children should receive the vaccine according to the routine schedule where they live. Some people with particular medical risks may also be offered Hib vaccination outside the usual childhood schedule.

The Hib vaccine does not prevent epiglottitis caused by other bacteria or by throat injury. Good hand hygiene and avoiding close contact with respiratory secretions may reduce the spread of some infections, but they cannot guarantee prevention.

Store caustic chemicals securely and keep very hot liquids away from young children. These steps may reduce the risk of non-infectious injury to the throat.

If laboratory testing confirms Hib, public health or infection specialists may assess close household contacts. Preventive antibiotics are recommended only in certain situations, based on who lives in the household and their vaccination or immune status. They are not routinely needed for every contact.

Living with it and what to expect

Epiglottitis is usually a short, acute illness rather than a long-term condition. Hospital monitoring continues until the airway is safe, fever is settling, and swallowing has improved. A breathing tube, if needed, is removed only after the swelling has reduced enough.

Improvement often begins after airway support and antibiotics, but the timing is different for each person. Throat discomfort, tiredness, or voice changes can continue for a short time after the immediate danger has passed.

Most people return to their usual activities after recovery and do not have lasting breathing problems. Follow-up may be used to confirm that symptoms have resolved, review test results, and make sure the recommended antibiotic course has been completed.

If Hib was identified, vaccination records and the needs of close contacts may be reviewed. Repeated episodes are unusual. If epiglottitis happens more than once, further assessment may look for an immune problem, an anatomical issue, or another source of throat inflammation.

Seek routine follow-up if swallowing remains painful, the voice does not return toward normal, fever comes back, or symptoms do not continue to improve after discharge. These concerns are different from new breathing difficulty, which requires emergency help.

When to get medical help

Call emergency services immediately for possible epiglottitis. Warning signs include:

Keep the person upright and as calm as possible while waiting for help. Do not force them to lie down. Do not examine the throat, place anything in the mouth, or give food, drink, or oral medicine if swallowing or breathing is difficult.

Do not drive someone with breathing difficulty to hospital if emergency transport is available. An ambulance team can provide oxygen and airway support if the condition worsens on the way.

After hospital treatment, contact the treating service promptly for returning fever, increasing throat pain, renewed difficulty swallowing, or inability to take prescribed medicine. Call emergency services again if any breathing difficulty, stridor, or drooling returns.

- Difficulty breathing or rapidly worsening breathlessness
- Stridor or another unusual noise when breathing in
- Drooling or inability to swallow saliva
- Blue, grey, or unusually pale lips or skin
- Sitting forward or refusing to lie down to breathe
- Severe throat pain with a muffled voice or breathing change
- Sudden worsening after a throat burn or chemical exposure

Common questions

Is epiglottitis contagious?

Epiglottitis itself is inflammation, so it is not something you "catch." However, some bacteria that cause it can spread through respiratory droplets or contact with nose and throat secretions. If Hib is confirmed, health professionals may assess whether close contacts need preventive treatment.

Can you get epiglottitis if you had the Hib vaccine?

Yes. Hib vaccination greatly reduces disease caused by Hib, but other bacteria and throat injuries can also cause epiglottitis. No vaccine prevents every possible cause.

Can epiglottitis go away on its own?

It is not safe to wait and see. Swelling can worsen and block the airway, sometimes before a person appears severely unwell. Suspected epiglottitis needs immediate hospital assessment

and usually antibiotic treatment.

What is the difference between epiglottitis and strep throat?

Both can cause fever and severe throat pain. Epiglottitis is more likely to cause drooling, a muffled voice, stridor, breathing difficulty, or a need to sit forward. Symptoms alone cannot safely confirm the cause, and any breathing or swallowing problem needs urgent assessment.

Why shouldn't I look at the throat?

Touching the back of the throat can cause gagging, distress, or sudden airway narrowing when tissues are already swollen. Examination should take place where trained staff can secure the airway immediately if necessary.

Can epiglottitis come back?

Recurrence is uncommon, but it is possible. More than one episode may lead to tests for immune problems, structural differences in the throat, or another cause of repeated inflammation.

Sources

- Centers for Disease Control and Prevention. Chapter 8: Haemophilus influenzae, Epidemiology and Prevention of Vaccine-Preventable Diseases . The Pink Book , 14th edition.
- Centers for Disease Control and Prevention. Clinical Overview of Haemophilus influenzae Disease .
- NHS. Epiglottitis .
- MSD Manual Professional Edition. Epiglottitis .
- Dowdy RAE, Cornelius BW. Medical Management of Epiglottitis. Anesthesia Progress . 2020;67(2):90-97. doi:10.2344/anpr-66-04-05.