CONDITION

Tracheitis

Tracheitis is inflammation of the windpipe, usually caused by a viral or bacterial infection.

WHAT IT IS
Inflammation of the windpipe

BODY SYSTEM
Lungs and breathing

MAIN SYMPTOMS
Cough, fever, noisy breathing, breathing difficulty

WHAT CAUSES IT
Usually viral or bacterial infection

HOW IT IS DIAGNOSED
Airway examination and tracheal secretion testing

MAIN TREATMENT
Airway support and treatment of the infection

CAN IT BE CURED?
Yes - acute infection usually clears with treatment

IS IT AN EMERGENCY?
Sometimes - noisy or difficult breathing needs urgent care

LONG-TERM OUTLOOK
Most people recover fully after prompt treatment

Overview

Tracheitis is inflammation of the trachea, commonly called the windpipe. The trachea carries air from your throat into your lungs. When its lining becomes swollen, sore, or coated with thick secretions, coughing and breathing can become difficult.

The term can describe inflammation caused by viruses, bacteria, or irritation. In medical settings, "tracheitis" often refers to bacterial tracheitis , a potentially serious airway infection. It is seen most often in children, although adults can also develop it.

Bacterial tracheitis sometimes begins after a viral infection such as a cold, influenza, or croup. The viral infection may damage the windpipe's protective lining, allowing bacteria to grow. Swelling and thick mucus can then narrow the airway.

Mild inflammation associated with a viral infection may improve with supportive care. Bacterial

tracheitis usually requires treatment in hospital because airway swelling can progress. With timely airway support and antibiotics like amoxicillin or doxycycline , most people recover fully.

An ordinary cough does not mean that you have tracheitis. Many conditions cause coughing, hoarseness, or a sore throat. Medical assessment is important when these symptoms occur with fever, noisy breathing, or increased effort to breathe.

Symptoms

Symptoms may begin like a viral respiratory infection and then become more severe. A child may appear to be improving from a cold or croup before developing a higher fever and worsening breathing.

Possible symptoms include:

The harsh sound made while breathing in is called stridor . It happens when air is being forced through a narrowed upper airway. Stridor can also occur with croup, an inhaled object, severe allergic swelling, or inflammation around the flap that covers the windpipe.

Bacterial tracheitis can look similar to croup but may cause higher fever, a more unwell appearance, and symptoms that do not improve as expected with standard croup treatment.

Adults may have cough, fever, shortness of breath, chest discomfort, or thick respiratory secretions. Symptoms can be more serious in people with weakened immune systems or existing airway problems.

- A deep, harsh, or painful cough
- Fever
- Hoarseness or a changed voice
- Noisy breathing, especially a harsh sound when breathing in
- Fast or difficult breathing
- Thick mucus that is hard to clear
- Pain or discomfort behind the breastbone
- Unusual tiredness, irritability, or reduced alertness

Causes and risk factors

Infectious tracheitis is caused by a virus, bacteria, or occasionally both. A viral respiratory

infection may occur first and make it easier for bacteria to infect the damaged tracheal lining.

Several bacteria can cause bacterial tracheitis. Staphylococcus aureus is commonly identified. Other possible causes include certain streptococci, Moraxella catarrhalis , and Haemophilus influenzae . Laboratory testing is needed to identify the organism; symptoms alone cannot show which bacterium is responsible.

Factors that may increase the chance of serious tracheal infection include:

A tracheostomy is an opening made through the neck into the windpipe to help someone breathe. People with a tracheostomy can develop irritation or infection around the tube, but this situation is managed differently from community-acquired bacterial tracheitis.

Smoke, chemical fumes, very dry air, repeated coughing, or stomach acid reaching the airway may also irritate the trachea. These causes do not usually produce the same severe illness as bacterial tracheitis. Persistent symptoms attributed to irritation need assessment because asthma, reflux, bronchitis, or another condition may be responsible.

- A recent viral respiratory infection
- A weakened immune system
- An existing narrowing or structural problem in the airway
- A tracheostomy or other artificial airway
- Recent procedures involving the airway

Diagnosis

Diagnosis starts with symptoms, breathing, temperature, oxygen level, and overall appearance. The immediate priority is deciding whether the airway is becoming too narrow. A clinician may avoid upsetting a child with severe breathing difficulty because distress can make breathing harder.

A neck X-ray may show narrowing or an irregular outline inside the trachea. A chest X-ray may be used to look for pneumonia or another lung problem. Imaging can support the diagnosis, but it does not always confirm or exclude tracheitis.

The clearest assessment may come from looking directly into the airway. This can be done with a thin flexible camera or during bronchoscopy, a procedure in which a viewing instrument is passed into the breathing passages. Bacterial tracheitis may produce marked redness, swelling, thick pus, or crust-like material inside the trachea.

A sample of tracheal secretions can be sent for culture. A culture grows and identifies bacteria

and helps guide antibiotic treatment. Blood tests and blood cultures may also be used when the infection appears severe.

These procedures are performed in a setting where the airway can be supported. Tests should not delay emergency breathing treatment when there are signs of significant obstruction.

Treatment and management

Treatment is based on the severity and likely cause. Suspected bacterial tracheitis generally requires hospital care.

The first priority is keeping the airway open and maintaining a safe oxygen level. Treatment may include oxygen, close monitoring, fluids, and removal of thick secretions. Some people need a breathing tube placed through the mouth into the trachea. This is called intubation . A ventilator can then support breathing while swelling and infection improve.

Bronchoscopy may be used to inspect the airway and suction out mucus, pus, or crusted material. It also allows a secretion sample to be collected.

Antibiotics are given when bacterial tracheitis is suspected. Treatment often begins before the culture result is available because airway infection can worsen quickly. The antibiotic choice may be adjusted after testing identifies the bacterium and shows which medicines are likely to work. The route and length of treatment are determined by the clinical course and test results.

If inflammation is part of a viral infection without bacterial tracheitis, care may focus on fluids, rest, fever relief, and monitoring. Antibiotics do not treat viruses. Steroids or inhaled medicines may be used when croup or another cause of airway swelling is also being considered, but they are not a substitute for airway support and antibiotics in bacterial tracheitis.

Do not try to examine the back of the throat of someone who is struggling to breathe. Do not give food, drink, or oral medicine if swallowing or breathing is severely impaired.

Complications

The main concern is obstruction of the airway by swelling and thick secretions. This can reduce the amount of oxygen reaching the lungs.

Other possible complications include:

Complications are more likely when airway narrowing is advanced or treatment is delayed. Close monitoring allows the care team to respond if breathing changes.

- Pneumonia
- Infection spreading into the bloodstream, called sepsis
- Respiratory failure requiring mechanical ventilation
- Acute respiratory distress syndrome, a severe form of lung inflammation
- Rarely, lasting narrowing of the airway after severe inflammation or intubation

Prevention

Tracheitis cannot always be prevented. It can follow an ordinary respiratory infection even when reasonable precautions have been taken.

Reducing exposure to respiratory infections may lower risk. Helpful measures include washing hands, covering coughs, avoiding shared cups or utensils during illness, and staying away from others when feverish or clearly unwell.

Keeping routine vaccines up to date can reduce some infections that may affect the airway, including influenza and certain bacterial infections. No vaccine prevents every cause of tracheitis.

Avoiding tobacco smoke, vaping aerosols, and strong chemical fumes can reduce airway irritation. People with a tracheostomy should follow their airway-care plan, including cleaning and secretion-management instructions from their clinical team.

Living with it and what to expect

Bacterial tracheitis is usually an acute condition, meaning it develops over a short period rather than continuing for years. The first phase may require intensive monitoring because airway swelling and secretions can change quickly.

Once treatment is working, fever and breathing often begin to improve over the following days. A breathing tube, if needed, is removed when swelling has reduced and the person can protect their airway and breathe safely. The total hospital stay is influenced by the severity of the infection, complications, and whether breathing support was required.

Cough, tiredness, or hoarseness may continue for a while after the infection is controlled. Activity can usually be increased gradually as breathing, sleep, and energy improve.

Most people do not have repeated episodes or permanent airway damage. Follow-up may be advised after severe infection, prolonged intubation, ongoing noisy breathing, or a slow

recovery. Persistent hoarseness, shortness of breath, or exercise limitation may lead to further airway or lung tests.

Repeated tracheitis is not typical. If episodes recur, clinicians may look for an airway abnormality, aspiration of food or liquid into the airway, immune-system problems, reflux, or an artificial-airway issue.

When to get medical help

Seek emergency help now if you or someone with you has:

Keep the person as calm and upright as possible while waiting for help. Do not force them to lie down or inspect their throat.

Arrange prompt same-day medical assessment for fever with a harsh cough, new noisy breathing, worsening symptoms after a viral infection, or breathing that is faster or harder than usual. A child who is drinking much less, passing less urine, or becoming unusually sleepy also needs prompt assessment.

Routine follow-up is appropriate after recovery if cough or hoarseness is gradually improving. Make an appointment if symptoms are not continuing to improve, return after treatment, or interfere with normal activity.

- Severe difficulty breathing or rapidly worsening breathing
- Stridor while resting
- Blue, grey, or unusually pale lips or skin
- Pauses in breathing
- Marked drowsiness, confusion, or difficulty waking
- Severe chest pulling between or below the ribs with each breath
- Inability to speak, cry, or drink because of breathlessness

Common questions

Is tracheitis the same as croup?

No. Croup is usually a viral infection causing swelling around the voice box and upper trachea. Bacterial tracheitis affects the trachea and often causes thicker secretions, higher fever, and a more unwell appearance. The two can look similar, and bacterial tracheitis may develop after croup.

Is tracheitis contagious?

The infection causing it may spread between people. Respiratory viruses spread through droplets, close contact, and contaminated hands or surfaces. Some bacteria can also spread, but exposure does not mean that another person will develop bacterial tracheitis.

Can adults get tracheitis?

Yes. Although bacterial tracheitis is more often recognised in children, adults can develop it. Risk may be greater with a weakened immune system, airway abnormality, or tracheostomy. Noisy or difficult breathing requires urgent assessment at any age.

Do antibiotics cure tracheitis?

Antibiotics treat bacterial tracheitis but do not treat viral inflammation. Because symptoms cannot reliably identify the cause, clinicians use the overall presentation, airway examination, and laboratory results to guide treatment.

How long does tracheitis last?

The most serious airway symptoms usually occur during the acute infection. Improvement may begin within days after effective treatment, but cough, hoarseness, and tiredness can last longer. Recovery time is influenced by the cause, severity, and whether complications occurred.

Can tracheitis be treated at home?

Mild irritation or an uncomplicated viral cough may be managed with supportive care after appropriate assessment. Suspected bacterial tracheitis should not be managed at home because swelling and secretions may narrow the airway. Noisy breathing at rest or difficulty breathing needs urgent care.

Sources

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