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Chest Infection

A chest infection is an infection that affects your lower large airways (bronchi) and your lungs. Pneumonia and bronchitis are the most common chest infections. Bronchitis is usually caused by a viral infection. Pneumonia is usually due to bacterial infection. Pneumonia may be serious and need hospital admission.

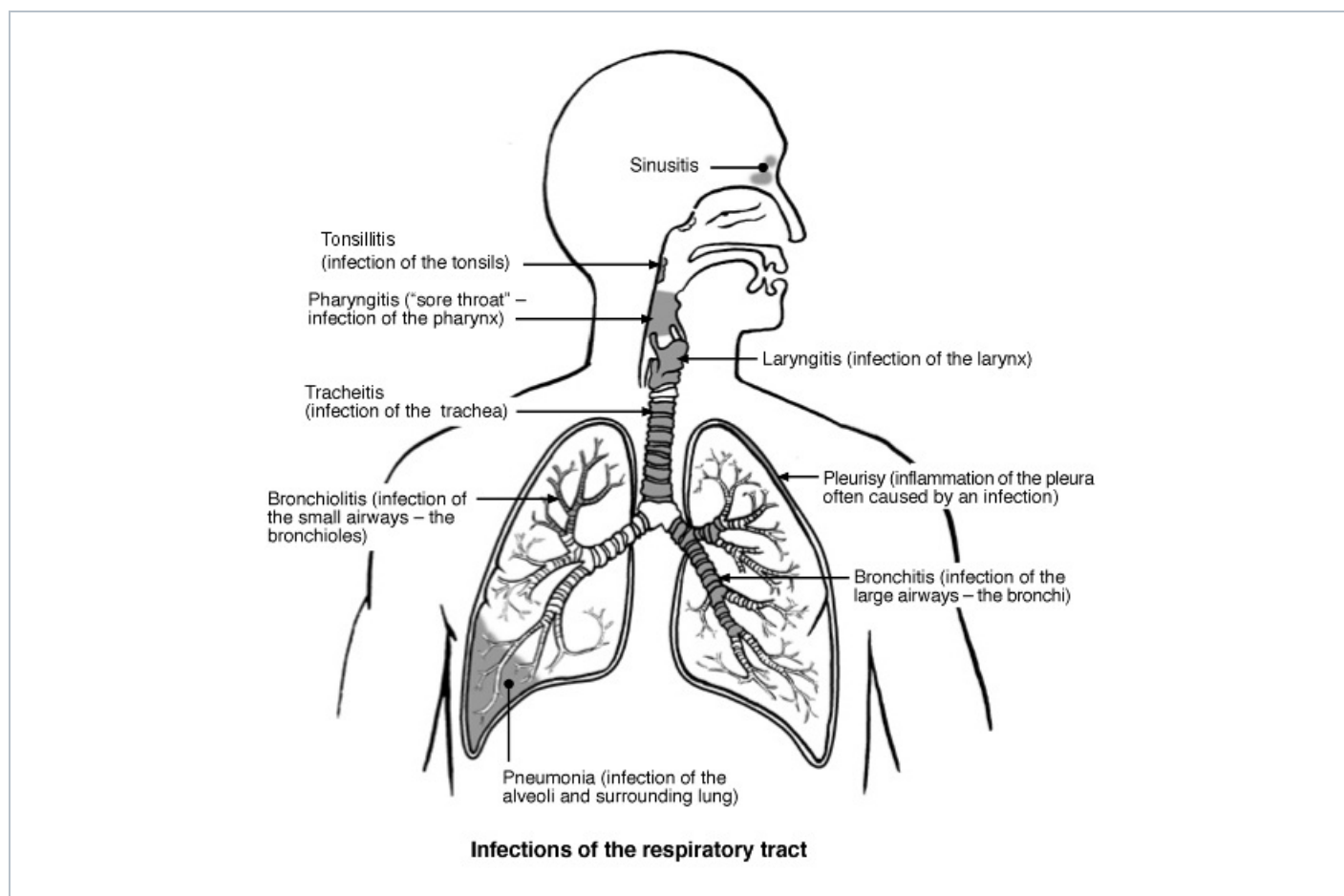
None of us like colds - and none of us can avoid them unless we plan to live our lives in a sterile bubble. But even though they can't be 'cured', at least they settle with no ill effects within a few days. Chest infections, on the other hand, can range from mild but unpleasant to life-threatening - and catching them early is key to reducing the risk of serious complications. That's why it's essential to know how to spot the signs of a chest infection.

What is a chest infection and what causes it?

Your 'respiratory tract' runs from your nose all the way down to the alveoli - tiny air spaces deep inside your lungs. Doctors call the large airways (bronchi) of the lungs and the lungs themselves the lower respiratory tract. A chest infection is an infection affecting your lower respiratory tract. Any infection higher up (including your nose and throat) is known as an upper respiratory tract infection (URTI).

The vast majority of URIs are caused by viral infections. Your immune system will fight these off without any help within a few days. Because URIs are caused by viruses rather than bacteria, antibiotics won't help in any way.

Read more about [antibiotics to treat respiratory tract infections](#).



Sometimes an infection in the upper airways can spread deeper, causing a chest infection. Sometimes germs (bacteria) already living in your lungs can multiply, with the same result.

There are two main types of chest infection - acute bronchitis and pneumonia.

- **Acute bronchitis** - bronchitis is inflammation due to infection of the bronchi. '-itis' is the medical term for inflammation. It can be acute or chronic. Acute means lasting a short time and chronic means lasting a long time. Acute bronchitis is common and is often due to a viral infection. Infection with a germ (bacterium) is a less common cause. [See separate leaflet called Acute Bronchitis for more details.](#)
- **Pneumonia** - this is usually a bacterial infection of the lung and may be serious. Treatment with antibiotics is usually needed. [See separate leaflet called Pneumonia for more details.](#)

"With a chest infection, you cough much more mucus up than a usual cold. If you cough up blood or rusty-coloured sputum, you should definitely see a doctor."

Source: GP Dr Julie Coffey (<https://patient.info/health/chest-infection/features/is-your-cough-really-a-chest-infection>)

Who gets chest infections?

Chest infections are very common, especially during the autumn and winter. They often occur after a **cold** or **flu**. Anyone can get a chest infection but they are more common in:

- Young children and the elderly.
- People who **smoke**.
- Pregnant women.
- People with long-term chest problems such as **asthma**, **chronic obstructive pulmonary disease (COPD)**, **cystic fibrosis**, **heart disease**, **diabetes**, **kidney disease** or **liver disease**.
- People with an immune system that's weakened either by conditions such as some cancers (including **lymphoma**, **myeloma** and **leukaemia**) or **AIDS**; or by treatments such as high-dose **steroids**, **chemotherapy** or other medicines that can suppress your immune system.

What are the symptoms of a chest infection?

A cold - often called an **upper respiratory tract infection (URTI)** - usually starts with a combination of blocked and/or runny nose and sneezing, sometimes with a mild high temperature (fever). You will usually get a cough, which is often dry and harsh but can also sound like you have a lot of phlegm (sputum), which you may bring up. You may also feel tired and achy, but these symptoms are usually fairly mild and you'll be able to keep going with everyday activities. Chest infections can start with these symptoms too, but you don't need to see a doctor if these are the only symptoms you have. The only exceptions are people with long-term lung conditions like **chronic obstructive pulmonary disease (COPD)** who are more likely to develop serious complications.

The main symptoms of a chest infection are:

- A chesty cough.
- Breathing difficulties (including shortness of breath and wheezing).
- Chest pain or tightness.
- High temperature.
- Headache.
- Muscle aches and pains.
- Feeling very tired.
- A rapid heartbeat.

When should you see a doctor?

Infection of the large airways (bronchi) in the lungs (**acute bronchitis**) usually gets better by itself, so there is often no need to see a GP. If you have **asthma** or **COPD** you should take your doctor's advice. They may have given you recommendations about increasing your inhaler medication or taking a 'rescue pack' of antibiotics and steroid tablets at the first sign of an infection. If not, speak to them for advice if you develop symptoms of a chest infection.

There are a number of symptoms that mean you should see a GP even if you do not have any other lung problems. They include:

- If a fever, wheezing or headache becomes worse or severe.
- If you develop fast breathing, shortness of breath, or chest pains.
- If you cough up blood or if your phlegm becomes dark or rusty-coloured.
- If you become drowsy or confused.
- If a cough lasts for longer than 3-4 weeks.
- If you have repeated bouts of acute bronchitis.
- If any other symptom develops that you are concerned about.

How is a chest infection diagnosed?

Your doctor will be able to make a diagnosis of a chest infection by listening to your story and examining you. They will ask about your symptoms and how you are feeling. They may also ask about your medical history and that of your family. They will be interested in whether you smoke, how much and for how long.

The examination may include checking your temperature. Sometimes your doctor will check how much oxygen is circulating around your body. This is done with a small device that sits on the end of your finger. The doctor will listen to your chest, so they may want you to lift or take off your top. If you want a chaperone during the examination, the doctor will arrange one. If you have asthma, they may ask you to check your peak flow measurement.

Often no tests are needed if you have infection of the large airways (bronchi) in the lungs (acute bronchitis) and your symptoms are mild. If your symptoms are more severe and you need to go to hospital then you may need to have the following tests:

- A **chest X-ray** may be taken to be sure of the diagnosis and to see how bad the infection is.
- Blood tests and phlegm (sputum) tests may be taken to find which germ (bacterium) is causing the serious lung infection (**pneumonia**). This helps to decide which antibiotic medicine is best to use. Sometimes the germ (bacterium) that is causing the pneumonia is resistant to the first antibiotic. A switch to another antibiotic is sometimes needed.

What is the treatment for a chest infection?

Although most chest infections are mild and improve on their own, some cases can be very serious, even life-threatening. A bout of infection of the large airways (bronchi) in the lungs (acute bronchitis) usually gets better on its own within 7-10 days without any medicines. If you suspect that you have a severe infection of the lung (pneumonia), you should see a GP.

What about antibiotics?

Antibiotics are medicines used for infections caused by **germs (bacteria)** and don't work on viruses. As bronchitis is usually caused by a virus, your recovery will rarely be helped by taking antibiotics. Taking antibiotics unnecessarily for bronchitis can cause side-effects and do more harm than good.

Pneumonia, unlike bronchitis, is often caused by a germ (bacterium) and may need treatment with antibiotics. If you have mild pneumonia, you can take antibiotics as tablets at home. If the pneumonia is more serious, antibiotics are given through a drip into a vein (intravenously) in hospital.

If the pneumonia is very severe, or caused by aggressive types of bacteria (such as **legionella** in **Legionnaires' disease**), you may need to be moved to an intensive care unit in the hospital.

What should I do to treat myself?

If you have a chest infection, you should:

- Have plenty of rest.
- Drink lots of fluid to prevent your body becoming lacking in fluids (dehydrated) and to help keep the mucus in your lungs thin and easier to cough up.
- Inhale steam vapour, perhaps with added menthol. This can help to clear the mucus from your chest. Never use hot water for a child's cough, in case they get scalded by accident
- Avoid lying flat at night to help keep your chest clear of mucus and make it easier to breathe.
- Take **paracetamol**, **ibuprofen** or **aspirin** to reduce high temperature (fever) and to ease any aches, pains and headaches. (**Note:** children aged less than 16 years should not take aspirin.)
- If you smoke, you should try to **stop smoking** for good. Bronchitis, chest infections and serious lung diseases are more common in smokers.
- If your throat is sore from coughing, you can relieve the discomfort with a warm drink of honey and lemon.

What about cold and cough remedies?

You can buy many other cold and **cough remedies** at pharmacies. There is limited evidence of any benefit from taking cold and cough remedies.

Cold and cough remedies often contain several ingredients. Some may make you drowsy. This may be welcome at bedtime if you have difficulty sleeping with a bronchitis. However, do not drive if you are drowsy. Some contain paracetamol, so be careful not to take more than the maximum safe dose of paracetamol if you are already taking paracetamol tablets.

Over-the-counter (OTC) cough and cold medicines should not be given to children aged less than 6 years. There is no evidence that they work and they can cause side-effects, such as allergic reactions, effects on sleep, or hallucinations. These medicines are available for children aged 6-12 years but they are also best avoided in this age group. If you are pregnant, make sure the pharmacist knows, as not all medicines may be suitable for you.

Note: paracetamol and ibuprofen are not classed as cough and cold medicines and can still be given to children.

What is the outlook (prognosis)?

Infection of the large airways (bronchi) in the lungs (acute bronchitis) usually clears without any complications. Occasionally, the infection travels to the lung tissue to cause a serious lung infection (pneumonia).

If you have pneumonia and are well enough to be looked after at home, your outlook is very good. If you need to be looked after in hospital, the outlook is still usually good - but not quite as good. The outlook is also not as good for people who also have long-term illnesses such as lung disease, heart failure or diabetes.

How can a chest infection be prevented?

There are measures you can take to help prevent chest infection and to stop the spread of it to others. You can pass a chest infection on to others through coughing and sneezing. So if you have a chest infection, it's important to cover your mouth when you cough or sneeze and to wash your hands regularly. You should throw away used tissues immediately.

Immunisation against the pneumococcal germ (bacterium) - the most common cause of bacterial pneumonia - and the **annual flu (influenza) virus immunisation** are advised if you are at increased risk of developing these infections, or of complications such as chest infections.

Children are not only more at risk of complications from these infections, they're also more likely to pass them on to others. That's why all children from age 2 years to those in school year 3 are offered an annual influenza vaccination with a nasal spray rather than an injection.

Cigarette smoke damages the lining of the airways and makes the lungs more prone to infection. So stopping smoking will lessen your risk of developing lung infections. See the separate leaflets called **The Benefits of Stopping Smoking** and **Tips to Help You Stop Smoking**.

Drinking too much alcohol can weaken your immune system, putting you at higher risk of chest infections. You can reduce your risks by sticking within recommended limits. See separate leaflet called **Alcohol and Sensible Drinking** for advice on sensible drinking levels.

- Men and women should avoid drinking more than 14 units a week.
- Your units should be spread out throughout the week rather than concentrated over one or two days.
- You should have at least two alcohol-free days a week.

A healthy balanced diet and regular exercise can help keep your immune system strong, reducing the chance of succumbing to infections, including chest infections.

Most healthy people can get almost all the vitamins and minerals they need from a healthy balanced diet. However, it's difficult to get enough vitamin D from your diet (most of our vitamin D is made in our skin when it's exposed to sunlight) and many people in the UK are short of vitamin D. Taking vitamin D supplements may help reduce the risk of getting respiratory tract infections.

Further reading & references

- **Guidelines for the management of community acquired pneumonia in adults**; British Thoracic Society (2009), Thorax Vol 64 Sup III
- **Guidelines for the management of adult lower respiratory tract infections**; European Respiratory Society and European Society of Clinical Microbiology and Infectious Diseases (September 2011)
- **Over-the-counter cough and cold medicines for children**; Medicines and Healthcare products Regulatory Agency (MHRA), 2009
- **Antibiotic awareness resources: key messages on antibiotic use**; Public Health England

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