



Non-tuberculous mycobacterial infection (NTM)

Non-tuberculous mycobacteria, or NTM, cause rare lung infections, mainly in people who have damaged lungs or who have a problem with their immune system. These infections are sometimes known as NTM pulmonary disease (NTM-PD).

If you live with a lung condition and have symptoms of an infection that don't go away – or get worse – despite your usual treatment for a flare-up, ask your health care professional to test specifically for NTM.

What is NTM?

Non-tuberculous mycobacteria, or NTM for short, are a group of bacteria that don't cause disease in healthy people.

People more likely to get NTM infections include those with long-term lung conditions like:

- bronchiectasis (blf.org.uk/support-for-you/bronchiectasis)
- cystic fibrosis (blf.org.uk/support-for-you/cystic-fibrosis)
- chronic obstructive pulmonary disease (COPD) (blf.org.uk/support-for-you/copd)
- pulmonary fibrosis (blf.org.uk/support-for-you/pulmonary-fibrosis)

This kind of infection is rare. It is not always clear why some people with these conditions get NTM infections and some don't. People with the long-term lung conditions sometimes carry the bacteria in their airways without it causing any problems. This is called being a carrier of NTM. This means it is not always necessary to treat NTM even if it is found in your sputum.

NTM infection may only be diagnosed if symptoms of an infection continue despite initial treatment for more common infections. NTM infections persist because mucus gets trapped in the lungs. Often, if you clear your mucus regularly and take regular exercise, NTM infections can go away.

But if an NTM infection continues, it can be serious, and you may need to take tablets to treat it for a year or two to clear it.

Unfortunately, once you've had an NTM infection, and it has gone away with or without antibiotic treatment, you can be re-infected.

There is no evidence that someone with an NTM infection can infect a healthy person or a person with an existing lung condition. But if you have any type of infection, it's always a good idea to cough into a tissue, dispose of tissues carefully and keep your hands clean.

What are non-tuberculous mycobacteria?

Non-tuberculous mycobacteria (NTM) are a family of common organisms found in water and soil. We all come into contact with NTM bacteria in our daily lives. They are in the same group of bacteria that cause tuberculosis (TB) ([blf.org.uk/support-for-you/tuberculosis](https://www.blf.org.uk/support-for-you/tuberculosis)) but **NTM bacteria do not cause TB**. There are lots of different species of NTM. Some are more likely to cause problems than others.

Should I try to avoid NTM in soil and water?

No. There's no clear evidence that things like stopping gardening, not showering or giving up swimming reduces the risk of getting an NTM infection. Or of getting infected again if you've already been treated.

Help your lungs fight off infection

The best way to help your lungs fight off an NTM infection is to keep active and to look after yourself. Have a flu jab each year, eat a healthy balanced diet and if you smoke, stop. Take your medication as prescribed and do your chest physiotherapy exercises regularly if you have bronchiectasis or cystic fibrosis. And avoid being around people with chest infections and colds.

What are the symptoms of NTM infection?

Symptoms are similar to those of other, more common, lung infections. They may develop slowly.

Symptoms include:

- cough, and coughing up sputum or blood
- fever
- losing weight and loss of appetite
- feeling very tired
- increasing shortness of breath
- night sweats

Many of these symptoms are the same as the symptoms of lung conditions too. For example, people living with bronchiectasis or COPD may experience cough, produce sputum and feel tired. If the symptoms of your existing lung condition get worse, often this is a flare-up of the condition itself. But it can also indicate an NTM infection.

How is NTM infection diagnosed?

Because the symptoms of an NTM infection are similar to other, more common, lung infections and lung conditions themselves, it may take some time to diagnose. Your health care professional must ask for a specific test to detect NTM in your sputum. Sputum samples are not routinely screened for NTM infections.

If you live with a lung condition and have symptoms of an infection that don't go away – or get worse – despite your usual treatment, ask your health care professional to test for NTM.

If you have been diagnosed with bronchiectasis ([blf.org.uk/support-for-you/bronchiectasis](https://www.blf.org.uk/support-for-you/bronchiectasis)) or cystic fibrosis ([blf.org.uk/support-for-you/cystic-fibrosis](https://www.blf.org.uk/support-for-you/cystic-fibrosis)) your sputum should be tested for NTM bacteria routinely. This often happens when you first see a specialist. Your sputum may also be tested every year or when your symptoms get worse.

If you have COPD ([blf.org.uk/support-for-you/copd](https://www.blf.org.uk/support-for-you/copd)), get a review with your health care professional if

- your symptoms are getting worse despite treatment or
- you have a chest infection that does not go away after several courses of antibiotics.

It is a good idea to send off sputum specimens for analysis if this happens to see if you have an unusual or resistant infection like Pseudomonas ([blf.org.uk/support-for-you/pseudomonas](https://www.blf.org.uk/support-for-you/pseudomonas)) or NTM.

To identify an NTM infection, your health care professional may:

- arrange an X-ray or a CT scan ([blf.org.uk/support-for-you/breathing-tests/other-tests](https://www.blf.org.uk/support-for-you/breathing-tests/other-tests))
- take a sample of your sputum. If you don't produce sputum, you may need a bronchoscopy ([blf.org.uk/support-for-you/breathing-tests/other-tests](https://www.blf.org.uk/support-for-you/breathing-tests/other-tests)) to get a sample

How is NTM infection treated?

Once you have a diagnosis of an NTM infection, you will be closely monitored. NTM infections continue because mucus gets trapped in the lungs. Chest physiotherapy and regular exercise can help NTM infections go away without treatment. But you will be given antibiotic treatment if:

- you continue to have symptoms due to NTM
- there is evidence of lung damage. For example, a CT scan shows inflammation in the lungs or widening airways

You will be treated with a combination of several antibiotics. It takes a long time to kill all the NTM bacteria, so you may be treated for a year or two. If you take all your medication as prescribed, you should be cured of your infection. However, it is possible that you may get another NTM infection. Some of the antibiotics used have common side effects. Discuss these with your health care professional.

If you forget or stop taking your NTM medication, the infection may return. This is serious:

- it is harder to treat as NTM bacteria can become resistant to the antibiotics you were taking
- you may need to take more medication
- you may need to have injections as well as tablets

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Ringing our helpline never costs more than a local call and is usually free, even from a mobile.

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We value feedback on our information. To let us know your views, and for the most up to date version of this information and references, call the helpline or visit [blf.org.uk](https://www.blf.org.uk)