

BTS Guideline for bronchiectasis in adults: a summary for the general public



Bronchiectasis is a long-term respiratory disease where the main airways of the lungs (the bronchi) become widened. This causes a build-up of mucus, which can make the lungs prone to infection. Common symptoms of bronchiectasis are a continuous, mucus-producing cough and sometimes breathlessness. It is often unclear what causes bronchiectasis, but other illnesses can be linked to this disease. Some examples are:

- Past infection such as pneumonia
- Asthma or chronic obstructive pulmonary disease (COPD)
- Immune deficiencies
- Inflammatory bowel disease and inflammatory arthritis
- Diseases that prevent the mucus being cleared from the airways

This BTS guideline gives advice on how to diagnose and manage bronchiectasis in adults (16 and older).

Cystic fibrosis is a genetic disorder that affects the lungs and bronchiectasis is a symptom of cystic fibrosis. Please note that this Guideline only gives advice on managing bronchiectasis in patients who do not have cystic fibrosis. The aim of the Guideline is to give advice to healthcare professionals who are caring for bronchiectasis patients.

Who should be investigated?

Patients who are mostly likely to have bronchiectasis are those with a continuous, mucus-producing cough. How should bronchiectasis be diagnosed?

A patient should have a chest X-ray and a CT scan if they are thought to have bronchiectasis. A CT scan gives high resolution images of the lungs and should be used to confirm a bronchiectasis diagnosis. Chest X-rays give much lower resolution images and do not always confirm bronchiectasis. However, having a chest X-ray at diagnosis will give a 'baseline' picture of the lungs and allow other diagnoses to be ruled out.

Investigations should also be carried out to find the cause of bronchiectasis and should include:

1. Recording the patient's past medical history to see if bronchiectasis is linked to another disease.
2. A series of tests, carried out by your specialist, to try and identify the cause of bronchiectasis. This will include a blood test.
3. Taking a sputum sample, which will be sent to the microbiology laboratory for testing.

If a doctor suspects that bronchiectasis is being caused by another disease (e.g. cystic fibrosis), tests may also be done to confirm this diagnosis.

How should bronchiectasis be treated?

The Guideline recommends that doctors follow a five step plan to treat bronchiectasis patients. Step 1 should be used to treat all bronchiectasis patients. Steps 2 to 5 should be used if a patient's symptoms are becoming increasingly worse.

Step 1

Step 1 is a treatment plan for all bronchiectasis patients. Part of this is a self-management plan, which helps patients to have better control of their illness. A self-management plan is personalised and gives patients advice on their treatments and what to do when things go wrong. A self-management plan should also be agreed between the patient and their doctor or nurse. It is important that patients stick to their self-management plan and talk about problems when things go wrong. If a patient's bronchiectasis symptoms change, their self-management plan should be updated.

Airway clearance techniques are breathing exercise that are used to clear excess mucus out of the lungs. All bronchiectasis patients should be taught airway clearance techniques by a respiratory physiotherapist. These should be checked three months after diagnosis and then every year at the patient's annual check-up.



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An exacerbation is when a patient's symptoms become worse. If a patient has an exacerbation they can be treated with a course of antibiotics.

Patients should be encouraged to have an annual influenza vaccination.

If bronchiectasis is caused by another illness, this illness should also be treated.

Step 2

If a patient is having more than two exacerbations per year they should have their respiratory physiotherapy checked. A treatment to help clear secretions may also be recommended through a nebuliser. A nebuliser is a machine that creates a mist, which can be inhaled through a mask or tube. Sterile saline can be inhaled through a nebuliser to help clear excess mucus from the airways. Patients can also be given muco-active treatment, the most common treatment given is in the form of tablets taken by mouth. Muco-active drugs cut down the amount of mucus produced by the lungs, or help to clear mucus from the lungs.

Step 3

Macrolides are a type of antibiotics that slow down bacterial growth and may reduce inflammation. They are usually taken for a few days to treat common bacterial infections (e.g. nose and throat infections). They also have effects on the human body that can be useful in lung disease. They can be taken long term (even for several years) to try and improve symptoms and cut the number of infections.

Patients who continue to have more than two exacerbations per year after Step 2 should be considered for long-term antibiotics. These can be inhaled or swallowed (given orally).

Step 4

Patients who continue to have more than two exacerbations per year after Step 3 should be moved on to Step 4. The guideline recommends that long-term macrolides and a long-term antibiotic are given together and the long-term antibiotic should be

inhaled.

Step 5

Patients who have more than four exacerbations per year after Steps 1-4 should be given an intravenous antibiotic. Intravenous means injecting into a vein and it is recommended that this treatment is given every 2-3 months.

How should bronchiectasis patients be monitored? All patients should have an annual check-up with their bronchiectasis doctor or nurse. The doctor or nurse should check if the bronchiectasis has got worse and assess if there is any change in the bacteria isolated from sputum. Bacterial infections are common in the airways, so it is important to monitor this at least once a year when the patient is stable. This helps the doctor or nurse to guide the patient's treatment and care. The doctor or nurse should tell patients if any changes are needed to their treatment. An earlier follow-up appointment should also be offered if a patient's bronchiectasis symptoms are getting worse.

Information for the public

This document has been prepared as a brief summary of the content and key points from the BTS Guideline for bronchiectasis in adults. If you have any queries about the Guideline and your personal medical circumstances please discuss these with your health care professional.

The full Guideline is available on the BTS website at: TBC

The content of this document may be used by health care professionals in discussions with patients and/or carers, but the source of the material must be acknowledged.

British Thoracic Society
14 December 2018



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