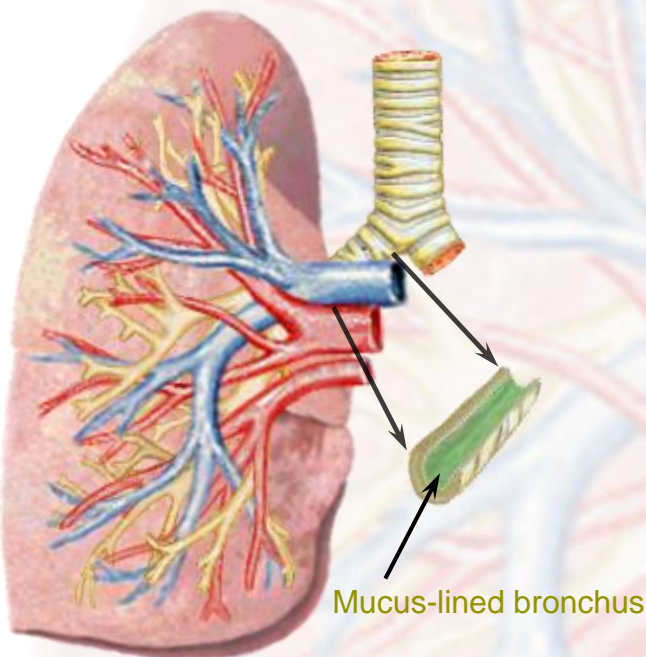


What is bronchiectasis?

- 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 are:
 - A continuous, mucus-producing cough
 - Breathlessness



What causes bronchiectasis?

- The cause of bronchiectasis is not always clear
- Other illnesses can be linked such as:
 - A 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

What causes bronchiectasis? (continued)

- Bronchiectasis is also a symptom of cystic fibrosis (a genetic disorder that affects the lungs)

What is this Guideline about?

- ★ The BTS Guideline gives advice on how to diagnose and manage bronchiectasis in adults (16 and older), but
- ★ The BTS Guideline **DOES NOT** give advice on managing bronchiectasis in patients who have cystic fibrosis

Which patients should be investigated?

- Patients who have a continuous, mucus-producing cough should be investigated

How should bronchiectasis be diagnosed?

- If bronchiectasis is suspected, a patient should have:
 - A CT scan – this gives high resolution images of the lungs and should be used to confirm a diagnosis of bronchiectasis
 - A chest X-ray – this gives a low resolution 'baseline' picture of the lungs. Although it may not confirm bronchiectasis, it can rule out other diagnoses.
 - An investigation to find out the cause of bronchiectasis, which should include:



Looking at the patient's medical history - is bronchiectasis linked to another disease?



Taking a blood sample – abnormalities in the blood may identify what is causing bronchiectasis



Taking a sputum sample – to check that the patient does not have tuberculosis (TB)



Other tests – if the doctor suspects that bronchiectasis is being caused by another disease (e.g. cystic fibrosis)

How should bronchiectasis be diagnosed? (cont.)

- ★ The BTS Guideline recommends that doctors follow a five step plan to treat bronchiectasis patients (please see the flow diagram below):
 - 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

How should bronchiectasis patients be monitored?

- All patients should have an annual check-up with their bronchiectasis doctor or nurse

How should bronchiectasis patients be monitored?

- The doctor or nurse should check:
 - If the bronchiectasis has got worse
 - If there are any bacterial infections
 - Bacterial infections are common in the airways, so it is important to monitor this at least once a year if the patient is stable
- Patients should also be monitored when an infection develops and, if necessary:
 - Changes should be made to the patient's treatments; and
 - An earlier follow-up appointment offered if the bronchiectasis symptoms are getting worse

The BTS Guideline five step plan for bronchiectasis treatment

Step 1 – All bronchiectasis patients should:

- Have a **self-management plan**
- Be taught **airway clearance techniques**
- Have **exacerbations** treated with a course of antibiotics
- Be encouraged to have an annual influenza vaccination
- Have other illnesses treated if causing bronchiectasis

Airway clearance techniques:

- Breathing exercises used to clear excess mucus out of the lungs
- All bronchiectasis patients should be taught airway clearance techniques by a respiratory physiotherapist
- Should be checked three months after diagnosis and then every year at a patient's annual check-up

Nebuliser:

- A machine that creates a mist, which can be inhaled through a mask or tube
- Sterile water or saline can be inhaled through a nebuliser to help clear excess mucus from the airways

Self-management plan:

- Helps patients to have better control of their illness
- Is personalised and gives patients advice on their treatments and what to do when things go wrong
- Is agreed between the patient and their doctor or nurse
- Should be followed by the patient and problems discussed when things go wrong
- Should be updated if a patient's bronchiectasis symptoms change

Exacerbation:

- When a patient's symptoms become worse

Step 2 – If a patient is having more than two exacerbations per year they:

- Should have their respiratory physiotherapy checked
- May be recommended a treatment to help clear secretions through a **nebuliser**
- May be given **muco-active drugs** (as tablets taken by mouth)

Muco-active drugs:

- Cut down the amount of mucus produced by the lungs
- Help to clear mucus from the lungs

(Step 3 follows on the next page...)

Step 3 – Patients who continue to have more than two exacerbations per year after Step 2 should be offered:

- **Long-term antibiotics**
 - These can be inhaled or swallowed (given orally)
 - If the type of bacterial infection is known, long-term antibiotics that target these bacteria can be used
- Or long-term **macrolides**
 - If there is no bacterial infection, or the type of infection is unknown, long-term macrolide treatment should be recommended

Macrolides:

- A type of antibiotics that slow down bacterial growth
- Usually taken for a few days to treat common bacterial infections (e.g. nose and throat infections), but
- Treatments can be taken long term (even for several years) to try and improve symptoms and cut the number of infections

Step 4 – Patients who continue to have more than two exacerbations per year after long-term antibiotic treatment:

- The **BTS Guideline** recommends that long-term **macrolides** and a **long-term antibiotic** are given together
- The long-term antibiotic should be inhaled

Long-term antibiotics:

- Similar to long-term macrolides, but in the BTS Guideline they are classed as different treatments

Step 5 – Patients who have more than four exacerbations per year after Steps 1 - 4:

- Should be given an **intravenous antibiotic**

Intravenous antibiotic:

- Intravenous means injecting into a vein
- It is recommended that this treatment is given every 2-3 months

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: <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/bronchiectasis-in-adults/>

The content of this document may be used by health care professionals in their discussions with patients and their carers provided the source of the document is acknowledged.

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