Bronchiectasis

Issued by Respiratory Medicine
The aim of this booklet is to help you manage your bronchiectasis. It contains information which you should find helpful, but is not intended to be an exhaustive guide.

Living with bronchiectasis can be difficult and there is a lot to think about and remember.

This leaflet will also help you know what to do if you have a flare-up. A flare-up is called an exacerbation, and is a time when your symptoms get worse. Each exacerbation has an effect on your general health.

**What is bronchiectasis?**

Air is carried in and out of the lungs by a series of branching tubes called bronchi. These bronchi contain tiny glands which produce a small amount of mucus which keep the airways moist and healthy and trap dust and germs which are breathed in. The mucus is then swept away to the back of the throat by tiny hairs that line the airway called cilia. In bronchiectasis these hairs are damaged causing mucus and bacteria to build up. In bronchiectasis there is also a permanent widening of one or more of the airways. Extra mucus tends to form and pool in these areas which can be difficult to cough up.

As a result people are more prone to infections which cause further inflammation and can lead to further damage.

The extent of bronchiectasis can vary greatly. Some people may only have one area of the lung that is affected, others may have many.

As the affected parts of the airway become damaged and inflamed, extra mucus is formed which is more difficult to clear. The airways also become more floppy and liable to collapse inward which may affect the airflow to the surrounding areas. The surrounding lung tissue may also be affected.
What causes bronchiectasis?

The cause is not always clear and in about half of cases there is no obvious cause. Some conditions which affect the airways can cause bronchiectasis. These include:

- Severe lung infections such as tuberculosis, whooping cough, pneumonia and measles
- Some joint conditions such as rheumatoid arthritis
- Underlying genetic conditions such as cystic fibrosis, where the mucus in the airways is too thick. This is usually discovered in childhood
- Inhaling foreign bodies such as peanuts can damage the airways
- Regurgitated acid from the stomach which is then inhaled can also damage the airways, although this is rare
- A reduced immunity to infection by a lack of antibodies
- Some chronic lung conditions such as asthma
What are the symptoms of bronchiectasis?

People with bronchiectasis often cough up a lot of sputum (phlegm) every day, which is usually yellow / green in colour, but some people only cough up sputum when unwell. Bad breath may also be a problem as the sputum can have an unpleasant smell. Sometime the sputum can be bloodstained due to tiny blood vessels breaking in the airways.

You may also have problems with breathing and be quite wheezy.

You may also feel tired and unwell and have a loss of appetite.

Many people with bronchiectasis also have chronic infection of the nasal sinuses and a constant runny nose.

Recurrent chest infections “exacerbations” or “flare-ups” are very common because an inflamed airway with extra mucus that is not cleared is ideal for bacteria to grow and multiply. Sputum turns more green/yellow when infected. If the amount of phlegm increases or the colour changes from your normal, this usually indicates an infection.

The severity of symptoms from bronchiectasis varies greatly. Some people have only mild symptoms with a cough that comes and goes from time to time with the occasional chest infection. At the other extreme some people have severe symptoms with continuous symptoms of infection. Most people with bronchiectasis fall somewhere between these two extremes.
What tests may I have?

A high resolution CT scan is used to diagnose bronchiectasis. This is a special X-ray which looks at the lungs in much more detail than a chest X-ray and can tell us how severe the bronchiectasis is. It is a painless test.

Other tests include:

**Breathing ("lung function") tests** to help determine how well your lungs are working.

**Sputum analysis** will tell us what bacteria are present and help guide antibiotic treatment.

**Blood tests** will help try and find out what is causing the bronchiectasis, although in 50% of people we never find an actual cause.

How is it treated?

Although bronchiectasis cannot be cured, the majority of people have mild disease and there are a variety of treatment options available for all. These aim to try and break the cycle of repeated infections and lung damage.

Your doctor will advise some of the following treatments for your bronchiectasis and potential side effects of the treatments will be discussed with you. Which treatments are given depends in part on how severe your condition is and your individual circumstances. One size does not fit all.
These are the main ways bronchiectasis is treated:

Physiotherapy
It is very important that you are able to clear your airways/lungs of phlegm on a daily basis to reduce your coughing, risk of infections and improve your everyday life. You will be referred to a physiotherapist to discuss the best way of doing this. The physiotherapist will ask you questions about your symptoms and your phlegm, and then discuss the options of different methods to help you remove the phlegm from your lungs. The physiotherapist will help you choose the airway clearance technique that is most suited to you and advise how often, how long, and in what position you should do the technique.

Exercise (even going for a walk) is very beneficial for people with bronchiectasis. The physiotherapist will discuss exercise with you, and ways to help improve your ability to exercise. If you are breathless during daily activities then the physiotherapist can teach you ways to manage your breathlessness. Sometimes a specialised exercise programme (pulmonary rehabilitation) will be recommended to improve fitness with the aim of improving quality of life.

Some people are also troubled by incontinence (leaking) of urine when coughing. This can be embarrassing or difficult to cope with in everyday life. The physiotherapist may be able to teach you some exercises to improve this.
**Antibiotics**

Antibiotics are the main way of treating bacterial infections which people with bronchiectasis will have from time to time. A change in the colour of your sputum to green and feeling unwell usually indicates that you have a chest infection and you should put a sputum sample in to your doctor’s surgery to help work out the best antibiotic for you to have.

It is a good idea to have a spare sputum container at home so you can promptly provide a sputum for culture at the start of an infection. Your GP surgery will be able to provide one as can the hospital when you attend for your appointment.

An antibiotic treatment regime can be created in order to limit the frequency and severity of exacerbations.

Antibiotics can be taken in a number of different ways:

- orally (as a tablet that is swallowed)
- intravenously (a liquid injected into a vein)
- or inhaled with a nebuliser (a device that converts liquid into mist so that it can be breathed in).

Chest infections may return quickly once you stop taking antibiotics. Some people may be advised to take antibiotics regularly to prevent infections from developing. And to reduce the amount of sputum coughed day to day.

Occasionally it is recommended for people with more severe bronchiectasis to have regular antibiotics through a nebuliser. This is a way of giving high doses of antibiotics into the airways with only small amounts getting into the body. This reduces the problem of side-effects. This approach is most often used for people who grow a bacterium called “Pseudomonas” in their sputum.
**Inhalers**
Sometimes inhalers are prescribed for people with bronchiectasis to try and reduce swelling and narrowing of the airways and to help cough, phlegm and breathlessness. Your doctor or nurse will help you to find the right combination of medication that will help maximise your quality of life.

**Nasal sprays**
These can help if you have a sinus infection or runny nose.

**Steroid tablets**
Sometimes steroids tablets eg. Prednisolone are recommended for people with bronchiectasis. These are usually given for one to two weeks to treat an exacerbation. The aim of them is to reduce airway swelling and help breathlessness and wheeze. They are not suitable for everyone.
Treatment of any associated disease / the underlying cause

Stopping smoking
If you smoke this will make your symptoms and lungs worse, so we strongly encourage you to try and stop. We can help you with this as we know it is hard.

Vaccinations
As with anyone with chronic lung disease we would encourage you to have the pneumonia vaccine, which only needs to be given once, and a yearly flu vaccine. Your GP surgery will be able to organise the vaccines for you, and usually run vaccination programmes in the autumn.

Surgery
In the past, before we had the antibiotics we have now, surgery was a common treatment for bronchiectasis, although did not tend to cure it. Surgery is only now recommended in exceptional circumstances.

How do I know when an exacerbation (flare-up) is on the way?

Although the aims of managing bronchiectasis are to try and reduce the number of exacerbations and your day to day symptoms, you will get exacerbations from time to time. It is important to spot one early, and know what to do.

If you have three or more of the following symptoms lasting more than 24 hours then this probably means you have an exacerbation or worsening of your bronchiectasis:
• Increased cough for more than 24 hours
• Increased breathlessness and / or wheeze for more than 24 hours
• Increased sputum volume or change in colour to yellow or green
• Chest pain which increases with coughing or taking deep breath
• Coughing up blood

**What do I do when an exacerbation happens?**

In the event of an exacerbation:

If you have a rescue pack of antibiotics at home please start taking them, after providing a sputum sample (which you should take to the GP surgery).

If you do not have a rescue pack of antibiotics at home please make an appointment to see your GP straight away and take a sputum sample with you to the appointment if possible.

If, despite taking your antibiotics you continue to feel worse, or you do not feel any better after the two week course please contact your GP or one of the Respiratory Nurse Specialists (contact numbers below).
What can go wrong?

Complications which can happen are:

Coughing blood (haemoptysis). Although coughing up blood is very common in people with bronchiectasis, and rarely requires specific treatment, there are other important causes. It would be advisable for you to seek medical help if you notice blood in your phlegm for the first time, or if it has been a problem before with infections, and does not settle with antibiotics.

Infection being spread by the blood to other areas of the body and a lung abscess. Both of these are rare.

Useful websites
www.blf.org.uk/Conditions/Detail/Bronchiectasis
www.brit-thoracic.org.uk

Contacts
For further advice please ring the Respiratory Nurse specialists:
Wansbeck General Hospital 01670 529267
North Tyneside General Hospital 0191 2932166
Hexham General Hospital 01434 655088
Alternative Formats
If you would like a copy of this information in large print, another language, audio tape or other format please call the Contact Centre on 0844 811 8118.

Other sources of information
NHS Direct 0845 46 47
www.nhsdirect.nhs.uk/

NHS Choices
www.nhs.uk/pages/homepage.aspx

NICE (National Institute for Health and Clinical Excellence)
www.nice.org.uk

Patient Advice and Liaison Service (PALS)
Freephone: 0800 032 0202
Text: 01670 511098
Email: northoftynepals@nhct.nhs.uk

Northumbria Healthcare NHS Foundation Trust
General Enquiries 0844 811 8111
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