What is bronchiectasis?

The name bronchiectasis comes from the Greek words:

*Bronckos* – airway

*Ectasis* – widening

Bronchiectasis is a chronic lung condition affecting the tubes (bronchi) which carry air through the lungs. In people with bronchiectasis, some of these tubes become permanently widened and damaged and so mucus (also known as sputum or phlegm) is difficult to clear from the lungs and this makes them prone to infection. Most patients will have symptoms for many years before a diagnosis is made (many patients are often wrongly told they have asthma or bronchitis).
How is it diagnosed?

A number of tests can be used to help diagnosis bronchiectasis. These include:

- **HRCT**: an HRCT scan is a special x-ray which can identify bronchial tube widening.
- **Lung function tests**: measure how well the lungs are working and if there is narrowing or blockage of the airways.
- **Sputum samples**: identify the presence of bacteria or other organisms in the sputum.
- **Blood tests**: help measure immune function and the presence of other conditions which may cause bronchiectasis.

What causes it?

There are numerous causes for bronchiectasis although for the majority an underlying cause is not found. The most common causes are repeated lung infections, defects of the immune system and hereditary disorders. These conditions commonly lead to failure of the normal mechanisms that clear infection and inflammation from the lung which leads to lung damage. Bronchiectasis is found in up to 30% of people with chronic obstructive pulmonary disease (COPD).

What are the symptoms?

The main symptoms are:

- **Chronic cough with sputum**
- **Recurring chest infections (exacerbations) and need for antibiotics**
- **Chest pain**
- **Shortness of breath / wheeze**
- **Tiredness and exercise limitation**
- **Chronic sinus inflammation**
- **Heartburn (gastro-oesophageal reflux)**
What treatments are available?

The main aims of treatment are to decrease the inflammation and infection of the airways and to maintain your general health.

This is generally achieved with:

**Antibiotics:**
- either oral, intravenous or nebulised

**Airways clearance program:**
- a daily routine, prescribed by a respiratory physiotherapist to help clear sputum out of the lungs, thereby decreasing the risk of infection. It may include:
  - breathing exercises (ACBT and autogenic drainage)
  - positive expiratory pressure devices (Flutter, Pari PEP etc)
  - inhalation of saline via a nebuliser
  - positioning

**Exercise program:**
- a prescribed exercise program is important to enhance airway clearance and for general well being. It should include moderate to high intensity aerobic exercises and strength training exercises

**Bronchodilators:**
- expand your airways making it easier to breathe

**Sinus management:**
- nasal sprays, sinus rinsing with saline

**Gastro-oesophageal reflux (heartburn) management:**
- prescribed medication, education
How can I help myself?

- adhere to your daily airway clearance routine
- discuss your action plan with your doctor
- if you are smoking – stop - discuss strategies with your doctor
- keep up to date with influenza and pneumonia vaccinations
- eat a well balanced diet
- drink plenty of fluids (unless prescribed a fluid restricted diet)
- exercise, singing, dancing and laughter all help to clear mucus

How do I know if I have an infection (exacerbation)?

If you have more than 2 of these symptoms, you may have an infection:

- Increased cough
- Increased amount of sputum
- Darker sputum
- Thicker sputum
- Feeling more tired than usual
- Sore throat / runny nose
- Increased shortness of breath or feelings of breathlessness

If you have any of these symptoms, you are highly likely to have an infection:

- New or increased blood in your sputum *
- An increased temperature / fever / sweats
- Loss of appetite

*Spots or flecks of blood in the sputum are not uncommon in bronchiectasis but if there is more than 2 ml or if bleeding persists you should see your doctor.
What is an action plan?

An action plan is your self management plan that you have discussed with your medical team for when you are both well and unwell.

**When you are well**
- take your regular medications
- do your airway clearance as prescribed
- exercise regularly
- eat well and drink plenty of fluids

**When you are unwell**
- start antibiotics as discussed with your doctor
- increase your airway clearance sessions
- get enough rest (do not exercise if you have a fever)
- increase your fluid intake and eat well

Seek medical attention within 48 hours if you do not improve.

As soon as your symptoms have settled, resume your normal airway clearance routine and exercise program.

What about the future?

Most people with bronchiectasis have a good outlook. To a certain extent, you are in control. Regular treatment and an early response to exacerbations is generally a pathway to maintaining your health. Lung function is more likely to decline in those who don't look after themselves. Bronchiectasis due to certain conditions may have a worse prognosis. It is important that you discuss this with your doctor.
Resources

GP: ___________________________________________________

Respiratory physician: ______________________________________

Physiotherapist: __________________________________________

Lung Foundation Australia: www.lungfoundation.com.au

Bronchiectasis Toolbox: www.bronchiectasis.com.au