



RESPCAIR
— Sleep & Pulmonary Institute —

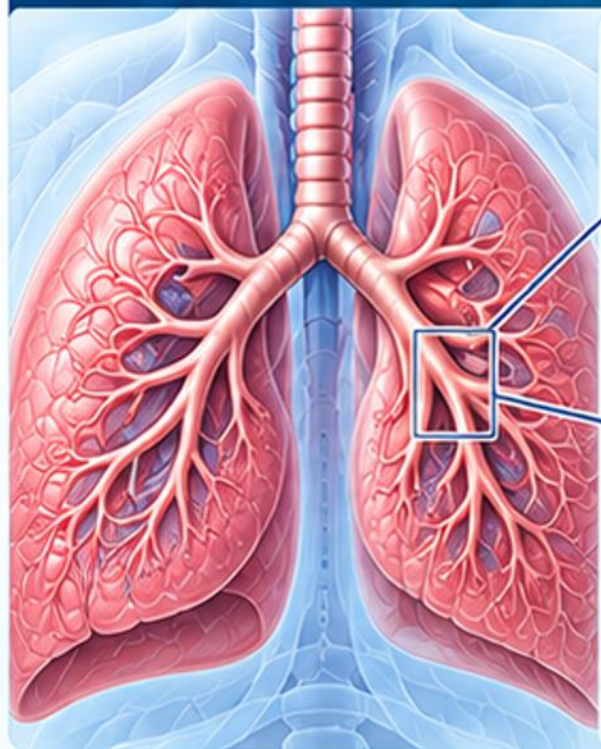
BRONCHIECTASIS

Understanding the condition. Better breathing. Brighter tomorrows.

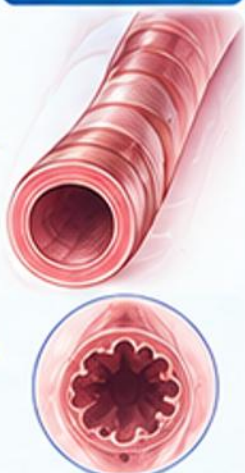
Bronchiectasis is a long-term lung condition where the airways become abnormally widened and damaged. This makes it harder to clear mucus, leading to repeated chest infections, ongoing inflammation and, in some people, a gradual decline in lung function. With the right diagnosis, treatment and support, many people can reduce flare-ups, improve symptoms and maintain a good quality of life.

**CONTROL
INFECTIONS
PROTECT
LUNG FUNCTION
IMPROVE
QUALITY OF LIFE**

WHAT HAPPENS IN BRONCHIECTASIS?

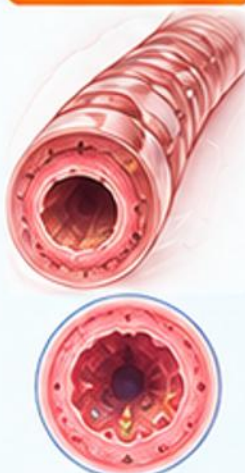


Healthy airway



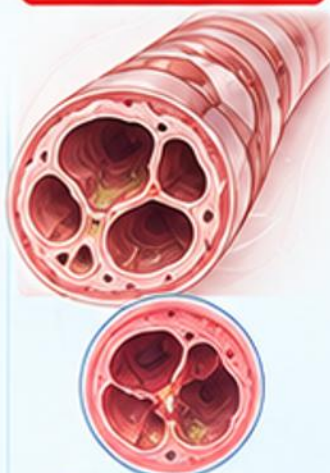
- Normal size
- Thin airway wall
- Clear mucus
- Cilia move mucus out of the lungs

Inflamed airway



- Swollen airway wall
- Increased mucus
- Narrower airway
- Impaired clearance

Bronchiectasis

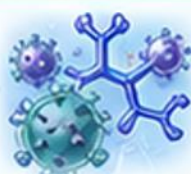


- Permanently widened airway
- Thickened, damaged wall
- Excess mucus pooling
- Impaired clearance
- Prone to infection

COMMON CAUSES



Previous severe lung infections
(e.g. pneumonia, TB, whooping cough)



Immune system conditions
(e.g. immunodeficiency, rheumatoid arthritis)



Airway blockage
(e.g. tumour, foreign body, post-surgery)



Genetic conditions
(e.g. cystic fibrosis, primary ciliary dyskinesia)



Aspiration and reflux
(e.g. gastro-oesophageal reflux, swallowing difficulties)



Sometimes no clear cause
(idiopathic bronchiectasis)

SYMPTOMS



Persistent productive cough
(mucus)



Excess mucus production



Frequent chest infections
(flare-ups)



Breathlessness
(particularly on exertion)



Fatigue and low energy



Chest tightness

POSSIBLE COMPLICATIONS



Recurrent chest infections



Further airway damage



Coughing up blood
(haemoptysis)



Reduced lung function over time



In severe cases respiratory failure
(can be life-threatening)



Reduced exercise tolerance



Work and social activities



Emotional wellbeing

IMPACT ON DAILY LIFE

HOW BRONCHIECTASIS IS DIAGNOSED

1 Clinical assessment



- Detailed history and examination
- Frequency of infections
- Sputum characteristics
- Identify possible causes

2 Lung function tests (spirometry)



- Measure lung volumes and airflow
- Monitor disease severity and progression

3 High-resolution CT (HRCT)



- Gold standard test
- Shows airway dilatation, wall thickening and mucus
- Helps determine extent and pattern of disease

4 Sputum tests



- Identify bacteria (including *Pseudomonas*)
- Guide antibiotic choice
- Check for fungal infection (e.g. *Aspergillus*)

5 Additional tests (if needed)



- Blood tests (immune function, inflammatory markers)
- Tests for underlying causes (e.g. CF, ciliary dyskinesia, autoimmune)

HRCT SCAN – TYPICAL FEATURES

Normal airway



- Round, smooth airway
- Normal size and wall thickness

Bronchiectasis



- Dilated, irregular airways
- Thickened airway walls

Mucus plugging



- Mucus-filled airways
- "Signet ring" appearance

Advanced disease



- Widespread airway changes
- Associated lung damage

ASSESSING DISEASE SEVERITY



Extent on CT scan
(how many lobes are affected)



Lung function results



Frequency of infections
and need for antibiotics



Type of bacteria in sputum
(e.g. *Pseudomonas*)



Overall impact on symptoms
and quality of life

TREATMENT OPTIONS

Airway clearance therapy (essential for all patients)



- Physiotherapy techniques
- PEP devices (e.g. Acapella)
- Active cycle of breathing techniques
- Helps clear mucus and reduce infections

Medications



- Inhaled bronchodilators
- Inhaled antibiotics (for frequent infections or *Pseudomonas*)
- Mucolytics (selected patients)
- Treat underlying cause (e.g. reflux, immune disorder)

Treating infections (flare-ups)



- Prompt antibiotics (based on sputum results)
- Oral or intravenous treatment for severe infections
- Vaccinations (influenza, pneumococcal, COVID-19)

Managing associated conditions



- Treat reflux and swallowing problems
- Manage immune conditions
- Address sinus disease if present

Advanced treatments (for selected patients)



- Treat specific causes (e.g. CF, immunodeficiency)
- Surgical options (rarely, for localised disease)
- Lung transplantation (for very advanced disease)

LIVING WELL WITH BRONCHIECTASIS



Stay active
and exercise
regularly



Stay hydrated
to keep mucus
thinner



Vaccinations
to prevent
infections



Avoid smoking
and lung irritants



Healthy diet
and weight
management



Emotional and
practical support

MONITORING AND FOLLOW-UP



- Regular review with your respiratory specialist
- Monitor symptoms, lung function and infections
- Repeat CT scans if needed
- Adjust treatment plan over time
- Support for self-management and airway clearance
- Discuss advanced options when appropriate

