

# Rare Lung Disease

## Bronchiectasis

### Disease State Overview

Bronchiectasis is a chronic condition of the lungs which typically occurs following years of respiratory complications or other conditions affecting the lungs. Bronchi act as a passageway for the air you breathe in to reach the lungs. Various lung conditions over time can cause inflammation, increased mucus secretions, and infections that cause permanent widening of the bronchi and damage to the lung tissue. So much damage can occur that the lungs aren't able to get rid of the increased mucus, and this in turn increases the risk of lung infections. As a result, bronchiectasis is essentially a cycle of lung damage, inflammation, and infections.

People at higher risk of developing bronchiectasis include those with compromised immune systems, lung infections such as pneumonia, chronic obstructive pulmonary disease (COPD), cystic fibrosis (CF) and other lung diseases. Bronchiectasis is diagnosed using various lung function tests and sampling/analyzing mucus. It can also be diagnosed with a CT scan or chest X-ray.

### Related Symptoms and Health Concerns

Symptoms of bronchiectasis can be non-specific and include:

- Chronic productive cough
- Frequent lower respiratory tract infections
- Fatigue
- Shortness of breath or wheezing
- Weight loss
- Chest pain/tightness

### Treatment

Bronchiectasis cannot be cured, but it can be managed. Treatment is highly variable between patients because the disease looks different in each person. Management may include various components, such as:

- Clearing the airways of mucus. Pulmonary rehabilitation is one of the most common ways this is accomplished, but other methods may be used. Nebulized hypertonic saline, mannitol, or mucolytic agents are also commonly used to help break up the mucus and make it easier to clear out.

- Oral antibiotics, such as azithromycin.
- Inhaled steroids and rescue inhalers.
- Inhaled antibiotics, such as Cayston (nebulized aztreonam), Arikayce (nebulized amikacin), or Tobi (nebulized tobramycin). These drugs are available in specialty pharmacies.

## Treatment Goals

The goals of treating bronchiectasis include:

- Improving mucus clearance with lung exercises
- Suppress and prevent bacterial colonization
- Reduce airway inflammation
- Improve physical function and quality of life
- Maintaining optimal therapy adherence
- Preventing, minimizing, and managing side effects of therapy

## Strategies to Achieve Treatment Goals

- Adherence to therapy
- Monitoring and follow-up with physician
- Reducing the risk of additional lung damage through smoking cessation
- Immunization against flu and pneumonia
- Appropriate management of other underlying diseases such as COPD, high blood pressure, anxiety, etc.

## Additional Resources

- <https://www.lung.org/lung-health-diseases/lung-disease-lookup/bronchiectasis>
- <https://my.clevelandclinic.org/health/diseases/21144-bronchiectasis>
- <https://foundation.chestnet.org/lung-health-a-z/bronchiectasis/>

## Sources

1. Imam J, Duarte A. Non-CF bronchiectasis: Orphan disease no longer. *Respiratory Medicine*. 2020(166):3-12. doi: 10.1016/j.rmed.2020.105940.
2. Chalmers JD, Aliberti S, Blasi F. Management of bronchiectasis in adults. *Eur Respir J*. 2015(45):1446-1462. doi: 10.1183/09031936.00119114.