

# What is Asthma?

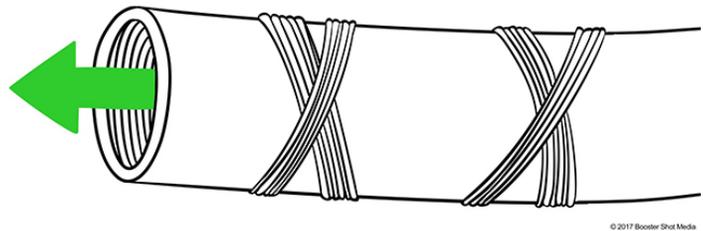
## How does asthma affect the lungs?

The lungs are made up of many tiny tubes. These tubes are called bronchioles. The bronchioles carry air in and out of the lungs. In a normal airway, air moves freely through the bronchioles and breathing is easy.

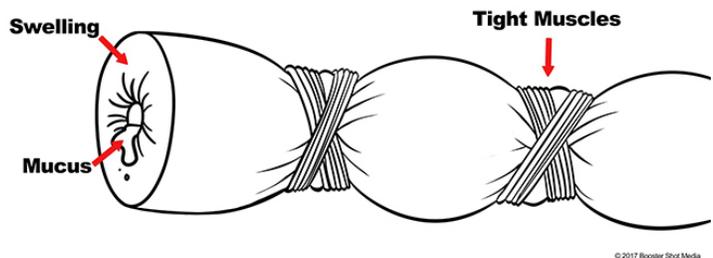
When asthma is not under good control, three things change in the airways that make it hard to breathe:

- The airways become swollen. The walls thicken and make the airways smaller.
- The airways make more mucous. Mucous is a thick liquid that your body makes. Mucous normally protects the nose, throat, and airways. When you have asthma, your body makes too much mucous. This mucous can plug the airways.
- Muscles around the airways squeeze tight. Your airways have muscles around them that are usually loose. When you have asthma, these muscles can tighten.

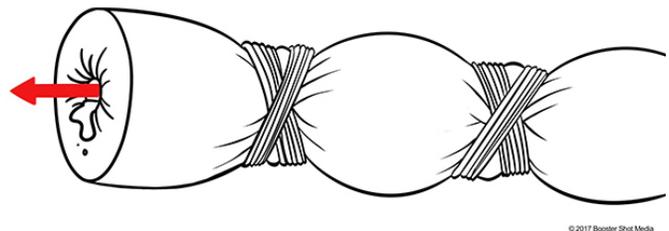
These three things all make the airways smaller. When the airways get smaller it is hard to get air in and out. This can cause wheezing, coughing and trouble breathing.



Normal airway: Air moves freely and breathing is easy



Asthma airway has swelling, mucus, and tight muscles



Asthma airway: Air not moving freely and breathing is hard

## Signs and symptoms of asthma:

When asthma is not well-controlled, symptoms may include:

### Cough

- An asthma cough is usually dry and hard to stop. The cough is not just from a cold. Asthma coughs often happen at night or after running or playing hard. The cough does not go away.
- The cough is caused by the muscles squeezing around the airways.

### Wheezing

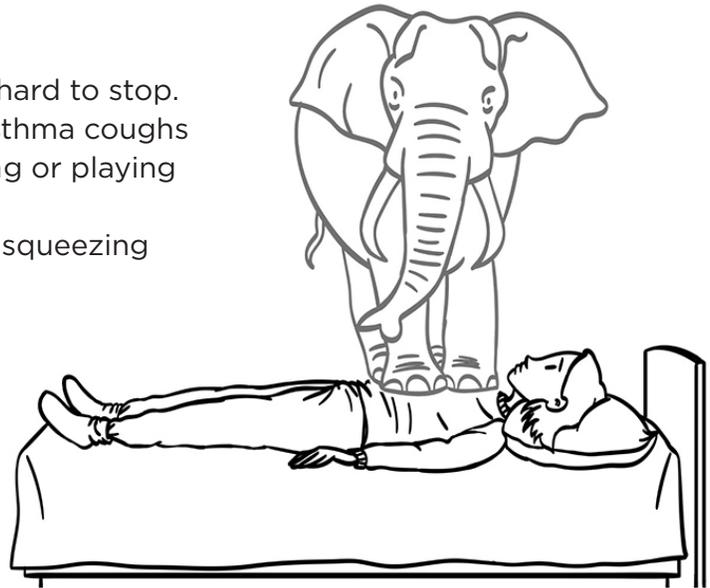
- Wheezing is a high-pitched sound.
- Wheezing is caused when your body has to push hard to get the air out of the lungs.

### Chest tightness

- People with asthma often feel like their chest is tight or heavy when their asthma is not under good control. People feel that they can't get a good breath in because their chest is too tight. This may also feel like an elephant standing on your chest.
- Chest tightness is caused by the swelling in the airway and the muscles squeezing.

### Trouble being active

- Regular daily activities like exercising, playing, sports or even walking up stairs can be hard to do. Children will often have to stop playing because it is hard to breathe.
- Decreased activity is caused by not being able to breathe easily.



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Chest pain in asthma can feel like an elephant standing on your chest



**When these symptoms are happening, you need to call the doctor because this means asthma is not under good control. Medicine doses may need to be changed or new medicine added.**