

# Let's Talk About...

## Breathing exercises: Active cycle of breathing

The active cycle of breathing technique (ACBT) is an airway clearance technique that helps your child clear their airway of mucus. The ACBT is a treatment that can help your child stay healthy and breathe easier.

### What is active cycle of breathing?

Active cycle of breathing includes three parts:

- Breathing control or relaxed breathing
- Thoracic expansion exercises (TEEs)
- Forced expiratory technique, which combines breathing control and huff coughing

### Why does my child need to use the active cycle of breathing technique?

Your child can benefit from performing the ACBT if they have sputum (mucus) in their lungs and need to loosen it so it can be moved up and out of the lungs. This technique may be performed alone or with other active cycle of breathing techniques for a 30-minute airway clearance session.

### What happens during the active cycle of breathing technique?

Your child will participate in the three parts of the active cycle of breathing. This will help to get air behind the mucus and clear the mucus from the lungs.



#### Part 1: Breathing control or relaxed breathing

Help your child do relaxed breathing, if possible, using their diaphragm. Have your child do the following:

1. Put one hand on your belly to feel the diaphragm move as you breathe in and out. Put your other hand on your upper chest to feel your rib cage move slightly.
2. Slowly breathe in through your nose. Your belly should move outward, and your hand over your belly should feel the most movement. When you let the air go, exhale slowly through pursed lips, like a whistle.

#### Part 2: Thoracic expansion exercises (TEEs)

Have your child do the following:

1. Breathe in slowly and as deeply as you can through your nose. When you don't think you can take in any more air, sniff a little bigger. Then hold your breath for 3 seconds. Holding your breath like this allows the air to get behind the mucus.
2. Open your mouth and exhale like you are sighing.
3. You will perform the TEEs 2 more times.

#### Part 3: Forced expiratory technique

This part combines breathing control and huff coughing:

1. Low-level huffs:  
Slowly inhale through your nose, a larger-than-normal breath (but do not completely fill your lungs). Hold your breath for 3 seconds. Then exhale while squeezing the air out, using your abdominal muscles. Keep exhaling as long as you hear air flow. Do this 2 more times.  
  
Before your child does a high-level huff, have them take a few breathing-control breaths.
2. High-level huff:  
Inhale slowly and deeply through your nose. Sniff bigger, then hold your breath for 3 seconds. Keeping your airway open, exhale quickly and forcefully. Repeat this 2 more times.
3. Putting your tongue on the roof of your mouth or making an exaggerated "O" with your mouth may help you keep an open airway.

