

For Cystic Fibrosis (CF) patients

What is autogenic drainage?

Autogenic drainage is a group of breathing exercises used to clear your airways. These exercises will help move mucus out of your lungs. It takes practice for these to work well. There are 3 parts to the breathing exercises. They must be done in this order:

1. **Loosen** the mucus in the small airways.
2. **Collect** the mucus in the middle airways.
3. **Move** the mucus from the large airways.

Prepare

- Sit in a relaxed position. Keep a glass of water and some tissues nearby.
- Take your bronchodilator treatment.
- Clear your nose and throat by blowing your nose and huff coughing.
- Breathe slowly. Take normal size breaths in through the nose and out through the mouth. Breathing in should take 1 to 3 seconds. Use your diaphragm to belly breathe in (inhale). Your mouth should be shaped like an "O".

Breathe out (exhale) with a little force, and in a controlled way. Keep your throat wide open as you blow out. This is like using your breath to steam a mirror. It may help to place one hand over your belly to feel that you are using your diaphragm to breathe.

1. Loosen the mucus in the smaller airways:

- a. Slowly breathe with normal size breaths. First, inhale through your nose. Then exhale through your mouth for as long as you can. Now you are at low lung volume.
- b. Take in a normal size breath. Hold your breath for 2 to 3 seconds. The breath hold is very important because it gets air behind the mucus.
- c. Exhale through your mouth. You should exhale with a little bit of force, and in a controlled way. Exhale as long as you can. You will have to use your belly muscles to do this.
- d. Repeat this cycle of breathing in and out at low lung volumes. Inhale slowly over 1 to 3 seconds to keep the mucus from sliding back into the smaller airways.
 - Remember to hold your breath.
 - Control your breathing and avoid coughing. If you hear a wheeze as you exhale, you may be blowing out too hard. When you are exhaling correctly, you can hear the mucus rattle. If you put your hand over your upper chest, you may feel the mucus vibrating.
- e. Continue this breathing until the mucus begins to collect and moves upward. This may take 1 to 3 minutes. You will know when this begins to happen when:
 - You hear crackling sounds as you exhale.
 - You feel the mucus moving up.
 - You feel a strong urge to cough.

When some or all of these occur, you will move to the next phase.

2. Collect the mucus in the middle airways:

- a. Slowly inhale a slightly larger breath. Hold your breath for 2 to 3 seconds. Exhale only about halfway before you take another breath. Now you are breathing at mid lung volume. Control your breathing and do not cough.
- b. Take in a normal or slightly larger than normal breath. Hold your breath, and then exhale the same amount of air that you breathed in. Remember to exhale with a little force. Repeat this cycle of breathing in and out.
- c. Listen again for crackling sounds. This may take 1 to 3 minutes. Control your breathing and do not cough. When you hear crackling sounds throughout your exhaled breath, do 2 to 3 more breaths, and move to the next phase.

3. Move the mucus from the central airways:

- a. Slowly inhale a deep breath. Hold your breath for 2 to 3 seconds. Exhale almost to a normal level. Now you are breathing at mid to high lung volumes.
 - b. Take in a large breath. Hold your breath, and then exhale the same amount of air you breathed in. Repeat this cycle of breathing in and out.
 - c. When you hear crackling sounds as you exhale, or when you cannot control the urge to cough, do huff coughs to clear the mucus.
- You have now finished one cycle of autogenic drainage. Rest for 1 to 2 minutes. As you rest you should relax and do belly breathing. Repeat all 3 parts of the exercises until you feel clear of mucus. The whole exercise should last about 20 to 45 minutes. The time it takes will depend on the amount and stickiness of the mucus. If you still have mucus at the end of the exercises, you should do the exercises more often or use another airway clearance therapy.

These exercises will get easier and faster the more you practice.

- **Controlling your cough:**

You may feel a strong need to cough while you are doing these breathing exercises. It is important not to cough until the mucus has moved to your upper airways. Try to relax to stop the cough. It may help to take a sip of water. Remember to keep using your belly breathing. Breathe in through your nose and out through your mouth.

For other health and wellness information, check out this resource:

<https://kidshealth.org/ChildrensWi/en/parents>

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

This sheet was created to help you care for your child or family member. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment and follow-up.