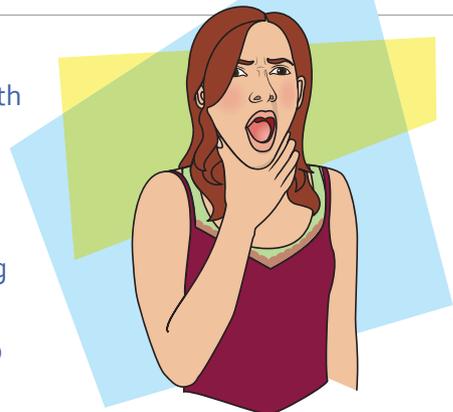


What are Vocal Cord Dysfunction (VCD) and Inspiratory Laryngeal Obstruction (ILO)?

Vocal Cord Dysfunction means that your vocal cords do not act normally. It is also called paradoxical vocal fold motion disorder. With VCD, instead of your vocal cords opening when you breathe in and out, your vocal cords close. When your vocal cords close, it makes it harder to get air into or out of your lungs. Sometimes another part of your voice box (larynx) above or around the vocal cords is causing the blockage of your breathing and so the problem is called ILO (inspiratory laryngeal obstruction). This fact sheet will focus on VCD but the same information applies to ILO.



Where are the vocal cords and what do they do?

Your vocal cords are deep in your throat in your voice box (larynx). Normally, when you breathe in (inhale), your vocal cords open. This allows air to go into your windpipe (trachea) and lungs. When you breathe out (exhale), your vocal cords open and let the air out of your lungs. Breathing out can cause your the vocal cords to vibrate and lets you produce sounds for speaking.

Common signs and symptoms of VCD

- Shortness of breath or difficulty getting air into or out of your lungs
- Tightness in the throat or chest
- Frequent cough or throat clearing
- A feeling of choking or suffocation
- Noisy breathing (stridor, gasping, raspy sounds or wheezing)
- Hoarse voice

VCD can come on suddenly and may be mild or sometimes severe and make you go to the emergency room. Even if an attack is severe, the oxygen level in your blood is usually normal. VCD symptoms do not usually occur during sleep.

VCD is often confused with asthma

Often people with VCD are thought to have asthma because the symptoms and triggers for VCD and asthma can be similar. However, symptoms from VCD are not relieved by taking asthma medicines that open your breathing tubes (bronchodilators like albuterol). A

confusing fact is that some people have both VCD and asthma. When a person with both VCD and asthma starts to cough, wheeze or have trouble breathing, it can be difficult to tell if the symptoms are from asthma, VCD, or both at the same time.

What can trigger VCD?

There are many different possible triggers of VCD. Often no trigger can be found. VCD may be triggered by:

- Acid reflux (GERD)
- Post-nasal drip
- Upper respiratory infection (cold)
- Exercise
- Strong odors or fumes
- Tobacco smoke
- Strong emotions and stress

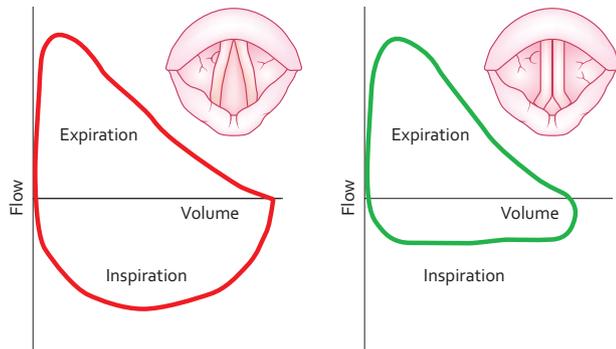
How do I know if I have VCD?

Your doctor needs to make sure that you do NOT have vocal cord damage, damaged vocal cord nerves, a vocal cord growth or other problems that are different than VCD. VCD can be very hard to prove. Your healthcare provider can find out if you have VCD by testing your breathing and looking at your vocal cords.

Common tests for VCD:

- Lung function (breathing) test called spirometry looks at how well air moves in and out of your lungs. It also includes a flow-volume loop to show how the air flows into your lungs. If you are having VCD

symptoms during the test, the test will sometimes, but not always, show blockage mainly of the air flowing into the lungs. Breathing test results are usually normal if your VCD is not active at the time of testing. This is one reason why determining if you have VCD can be so hard. (See the ATS fact sheet on Pulmonary Function Tests.)



- Laryngoscopy is the best way to tell if you have VCD. A healthcare worker will look at your vocal cords when you are having difficulty breathing. To look at your vocal cords, a small, flexible tube with a camera (laryngoscope) is passed through your nose to the back of your throat where your vocal cords can be seen. Before the laryngoscope is put into your nose, medicine to numb your nose and throat is used. The test is usually done as an outpatient. You are awake for this test and during the test you may be asked to talk, to see if your vocal cords work normally. Laryngoscopy can help show that you do NOT have vocal cord damage or other vocal cord problems besides VCD.
- A challenge study may be done with lung function testing after you exercise on a treadmill or cycle or inhale a medicine called methacholine or histamine to try to bring on VCD symptoms. If symptoms develop, a breathing test or laryngoscopy will be done to confirm the abnormal closure of the vocal cords. A challenge study may be combined with laryngoscopy.

How is VCD treated?

VCD is different than many other breathing problems because medicines are not the main treatment to control or prevent VCD.

- The main treatment for VCD is learning techniques that help you control your vocal cords. These techniques are usually taught by a speech therapist or psychologist who is trained and experienced in treating VCD.
 - The techniques you will learn will help to improve your ability to relax your throat muscles which

allows your vocal cords to behave normally.

- You may have to meet with a therapist at least 2–3 times to learn these techniques.
- Learning these techniques takes regular practice. You will need to practice them even when you are not having VCD, so you can be ready to control the symptoms before they become severe.
- Strong emotions and stress can trigger VCD so it is important to learn to manage your stress. Relaxation techniques, biofeedback, and psychotherapy have been shown to be helpful in controlling VCD.
- If you have asthma and VCD, it is important that you take actions to keep both under good control.
- If your VCD is triggered by post-nasal drip or acid reflux (GERD), it is important to talk to your healthcare provider about what you can do to control these.

Authors: Marianna Sockrider MD, DrPH, Dan Craven MD, Hazel Hewitt MA, CCC-SLP, Susan Brugman MD

Reviewers: Bonnie Fahy RN, MN, Gustavo Matute-Bello, MD, Roomi Nusrat MD, Sumita Khatri MD, Ben Suratt MD

Rx Key Points

- ✓ If you or your healthcare provider thinks that you may have VCD or exercise induced ILO, ask to see a VCD specialist.
- ✓ Learn the techniques that control VCD and practice them regularly.
- ✓ If you have asthma or acid reflux, take your medicines regularly.
- ✓ Work on ways to reduce your stress and do what helps you relax and stay calm.

Healthcare Provider's Contact Number:

Resources:

American Thoracic Society
www.thoracic.org/patients

National Jewish Medical and Research Center
www.nationaljewish.org/conditions/vocal-cord-dysfunction-vcd

Allergy and Asthma Network: Mothers of Asthmatics
<http://www.allergyasthmanetwork.org/education/related-conditions/common-related-conditions/vocal-cord-dysfunction/>

This information is a public service of the American Thoracic Society. The content is for educational purposes only. It should not be used as a substitute for the medical advice of one's healthcare provider.

