

What Is Vocal Cord Dysfunction (VCD)?

Vocal Cord Dysfunction means that your vocal cords do not act normally. 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.



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. Without treatment, a severe attack may require emergency room treatment. Even if an attack is severe, the oxygen level in your blood is usually normal. VCD symptoms do not usually occur during sleep.

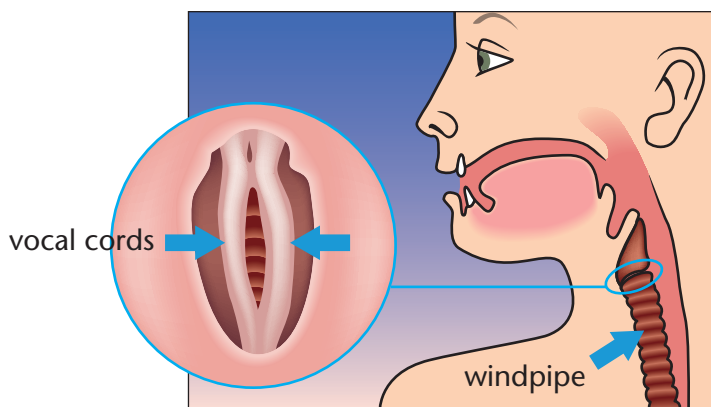
What can trigger VCD?

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

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.



PHYSICIANS:
**CLIP
AND
COPY**

How do I know if I have VCD?

VCD can be very hard to detect. Your health care provider can find out if you have VCD by testing your breathing and looking at your vocal cords. The breathing test is called spirometry and must include a flow-volume loop. This test shows how well air moves in and out of your lungs. If you are having VCD symptoms during the test, the test will usually, but not always, show blockage mainly of the air flowing into the lungs. Breathing test results can be 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. To learn more about the spirometry test, see the ATS Patient Information Series fact sheet: *“Pulmonary Function Tests”*.

The best way to tell if you have VCD is for a health care provider to look at your vocal cords when you are having difficulty breathing. To look at your vocal cords, a small, flexible fiberoptic tube (laryngoscope) is passed through your nose to the back of your throat where your vocal cords can be seen. Before the tube is put into your nose, medicine to numb your nose and throat is used. The test is usually done as an outpatient so you do not need to stay in the hospital. You are awake for this test and during the test you may be asked to talk, to see if your vocal cords work normally.

You may be asked to exercise on a treadmill or cycle with the breathing testing or may inhale a medicine called methacholine or histamine during testing to try to bring on the VCD symptoms. If symptoms develop, a breathing test or laryngoscopy will be done to confirm the abnormal closure of the vocal cords.

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 3 to 4 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 your asthma is 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, Bonnie Fahy RN, MN

For additional information:
National Jewish Medical and Research Center
<https://www.njc.org/healthinfo/conditions/vcd/>
Allergy and Asthma Network: Mothers of Asthmatics
<http://www.aanma.org/2009/02/vocal-cord-dysfunction-something-to-talk-about/>

Rx *What to do...*

- ✓ If you or your health care provider thinks that you may have VCD, 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.

Doctor’s Office Telephone:

The ATS Patient Information Series is a public service of the American Thoracic Society and its journal, the AJRCCM. The information appearing in this series is for educational purposes only and should not be used as a substitute for the medical advice one one’s personal health care provider. For further information about this series, contact J.Corn at jcorn@thoracic.org.

VCDQ Questionnaire

Developed in England

Table 2. The 12-item Vocal Cord Dysfunction Questionnaire (VCDQ)

	Disagree Strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly	Score
Question	1	2	3	4	5	
My Symptoms are confined to my throat/upper chest	1	2	3	4	5	
I feel like I can't get breath past a certain point in my throat/upper chest because of restriction	1	2	3	4	5	
My breathlessness is usually worse when breathing in	1	2	3	4	5	
My attacks typically come on very suddenly	1	2	3	4	5	
I feel that there is something in my throat that I can't clear	1	2	3	4	5	
My attacks are associated with changes in my voice	1	2	3	4	5	
My breathing can be noisy during attacks	1	2	3	4	5	
I'm aware of other specific triggers that cause attacks	1	2	3	4	5	
My symptoms are associated with an ache or itch in my throat	1	2	3	4	5	
I am frustrated that my symptoms have not been understood correctly	1	2	3	4	5	
I am unable to tolerate any light pressure around the neck – <i>e.g. tight clothes</i> or <i>bending the neck</i>	1	2	3	4	5	
The attacks impact on my social life	1	2	3	4	5	

EXERCISES FOR VOCAL CORD DYSFUNCTION

DIAPHRAGMATIC BREATHING

Many people who experience difficulty breathing will benefit from lower, relaxed breathing that fills the part of the lungs below the shoulders, armpits, and upper chest – not just the upper lung area near the shoulders. Many people tighten the neck and shoulder muscles in response to air hunger, thereby increasing the experience of throat tightness. The goal of this exercise is to become comfortable with low, deep diaphragmatic breathing.

How:

1. Sit or lie quietly with one hand on your chest and one hand on your belly, below your ribcage.
2. Without changing anything, notice the movement when you inhale and exhale.
3. Try to make your belly rise or expand outward when you inhale deeply. When you exhale, let your belly deflate or move in as the air leaves your body.
4. Do this deep breathing without moving your shoulders.
5. Deep, relaxed breathing is rhythmic, with equal intervals of inhalation and exhalation.

SNIFF-BREATH TECHNIQUE

This is the actual breathing manoeuvre that will be used when the first trigger of a VCD episode is identified. Being able to breathe through the nose is important for this step. Blow your nose if necessary before beginning.

How:

1. Practice sniffing deeply through your nose.
2. Practice sniffing in deeply and quickly. 3 quick sniffs that rapidly follow one another allows air into your lungs by forcing your vocal folds open.
3. After you take 3 quick, deep sniffs into your body, exhale through pursed lips or while making any of the following sounds for a count of 8-10: "s, sh, f".
 - This step is important to keep your throat open when you exhale.
 - You must exhale as completely as possible to avoid hyperventilation
4. Do 5 consecutive sniff-breath exercises at five times throughout the day. It helps to pair the exercise with a routine activity such as mealtime, tooth brushing, and bedtime. Do the exercise before starting the activities that tend to trigger the Vocal Cord Dysfunction episode, and at the first sign of onset of a VCD episode.

The Goal is to ward off the episodes, recover breathing more quickly and easily, reduce the frequency of episodes, and eventually, keep them from happening at all.

Source: National Jewish Medical and Research Center (1995). Retrieved February 8, 2006 from <http://www.njc.org>

Sandage, M. & Zelazny, S (2004). Paradoxical Vocal Fold Motion in Children and Adults. *Language, speech, and hearing services, in schools*. 35(4), 353-362

Belly Breathing

Diaphragmatic Breathing

1. Stand, sit or lie down comfortably in a quiet place.



2. Close your eyes and loosen any tense muscles. Make sure to relax your shoulders.



3. Place one hand on your upper chest and another on your belly button.



4. Breathe in slowly through your nose for *three seconds*. Feel your stomach expand. Your chest should remain still.



5. Breathe out slowly through your mouth for *three seconds*. Feel your stomach move back.



6. Repeat steps 4 and 5. Gradually increase the time you take to breathe in and out.

Four seconds in and four seconds out, five seconds in and five seconds out.....