

VOCAL CORD DYSFUNCTION INFORMATION SHEET

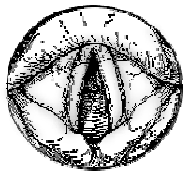
Many diseases can either mimic or worsen asthma. One disease which is very common among the patients who are initially considered to have asthma is vocal cord dysfunction. Vocal cord dysfunction can exist by itself or can exist with asthma. Vocal cord dysfunction occurs when the vocal cords do not open and shut properly during breathing or speech. This can cause a great number of symptoms very similar to asthma including wheezing, cough, and shortness of breath. Unlike asthma, patients with vocal cord dysfunction typically do not get better with either a bronchodilator or with corticosteroids.

Although vocal cord dysfunction can occur in both children and adults, women tend to be more likely to develop vocal cord dysfunction in adults. There additionally appears to be a link between vocal cord dysfunction and participation in competitive sports. Although the incidence of vocal cord dysfunction is not entirely clear, many studies suggest that it is the cause of approximately 10% of cases of presumed asthma.

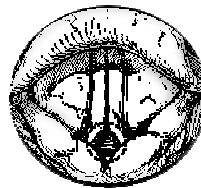
WHAT HAPPENS WITH VCD?

To understand VCD, it is helpful to know how the vocal cords function normally. When you breathe in, or inhale, the vocal cords open, allowing air to flow into your windpipe (trachea) and reach your lungs. However, with Vocal Cord Dysfunction, the vocal cords close together, or constrict, when you inhale. This leaves only a small opening for air to flow into your windpipe and this causes breathing difficulty.

The Vocal Cords



'Breathing In' normally



'Breathing In' during an episode of VCD

SIGNS AND SYMPTOMS OF VCD

- Common symptoms include a chronic cough, shortness of breath, difficulty breathing, chest tightness, throat tightness, "difficulty getting air in," hoarseness and wheezing.
- Children with VCD usually cannot control the vocal cords to make the symptoms start or stop.
- Sudden attacks may occur.
- Many children with VCD may be diagnosed with asthma and treated with asthma medications. Since VCD is not asthma, the symptoms do not improve with this treatment.
- When VCD is not treated properly, it may lead to frequent emergency room visits and hospitalizations.

DIAGNOSIS

Breathing tests may be normal and not show signs of asthma. A specific breathing test called a flow volume loop, can be helpful in showing VCD, especially on the "breathing in" or inspiratory part of the loop. This is only helpful if it is done while you are having symptoms.

A procedure called a laryngoscopy is the an important test in making the diagnosis of VCD although it can be difficult to arrange as a laryngoscopy should be done when you are having symptoms because abnormal vocal cord movements do not occur all the time. This procedure is performed by a specialized physician. Using a flexible tube, the physician can see how your vocal cords open and close. Other tests may be done to trigger symptoms so that your physician can observe your vocal cords when you are having symptoms. *It is important to know that people with Vocal Cord Dysfunction cannot produce symptoms voluntarily.*

DIAGNOSIS

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

WHAT CAN TRIGGER VCD SYMPTOMS?

Possible triggers of VCD are often similar to asthma triggers. Triggers may include upper respiratory infections, fumes, odors, cigarette smoke, singing, emotional upset, post-nasal drip and exercise. Sometimes the trigger is not known.

HOW IS VCD TREATED?

Speech therapy is a very important part of the treatment for VCD. Special exercises increase your awareness of abdominal breathing and relax your throat muscles. This enables you to have more control over your throat. You will learn to practice these exercises while you are symptom-free in order to effectively use the exercises during VCD episodes. These exercises help overcome the abnormal vocal cord movements and improve airflow into your lungs.

Another important factor in the treatment of VCD is supportive counseling to learn stress management as stress may be a factor in VCD.

Acid suppression medication can sometimes help children with VCD who have acid reflux that brings on or worsens the VCD symptoms.

BREATHING EXERCISES / MANAGEMENT STRATEGIES FOR HYPERVENTILATION AND/OR VOCAL CORD DYSFUNCTION

1 Exhaling through pursed lips

Try exhaling through slightly pursed lips, like gently blowing out a candle whilst whispering a gentle 'ffffffffffffffff' sound. Keep lips symmetrical about teeth rather than puckered and do not have lower lip touching upper teeth as it would be if you were to say 'Frank'. Some people prefer to make a hissing sound. Others prefer to whisper an exhaled 'ffff', 'ffff', 'ffff' sound in the same breath in short bursts.

2 The 7:11 Breathing Pattern - the opposite of hyperventilation

Sit down and close your eyes for a little while. Just become aware of your breathing...and breathe in to the count of seven... and breathe out to the count of eleven. You can hold for a couple of seconds at the bottom of the out breath if that's comfortable for you. It may be a little difficult at first, but doing this **regularly** causes your general anxiety level to come down. You may also find that you begin to breathe this way automatically if you feel anxious. Regular relaxation actually starts to inhibit the production of stress hormones in the body so it actually becomes harder and harder to panic. As you become more generally relaxed the 'baseline' of arousal from which you are starting lowers. It becomes harder to get stressed! Hyperventilation responds very well to this technique. If you practice this daily, hyperventilating should cease to be a problem very quickly. It can also give you much more control over panic attacks.

3 Abdominal / Diaphragmatic Breathing

Focus attention on the lower abdominal muscles, place one hand gently on the abdomen with the thumb on the navel and the fingers below the thumb. Whilst exhaling, bring the abdomen "in" towards the back making the tummy appear smaller, then just let the tummy out whilst inhaling. Try not to use chest or throat muscles. If the hand is placed on the chest during abdominal breathing it should not be moving. Practice these techniques several times daily until you are familiar with them so that you will be able to use them more effectively when necessary.