### LARYNGOSPASM VERSUS CHOKING and ASPIRATION

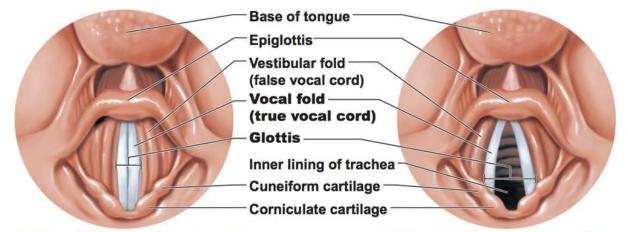
by

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These conditions are most often triggered by drinking any fluid or when food is going down the wrong way.

*Laryngospasm* is a terrifying experience, where before you pass out, your muscles will relax, and you will be able to breathe once again. Swallowing the wrong way and you suddenly cannot catch your breath and feel you are going to pass out and die. As unnerving as this experience is, what you need to remember is that no one dies from laryngospasm.

This involuntary reflex can be triggered by several things, including fluids, foods, and touching the opening of the larynx. It can occur as a post-surgery complication and from severe cold – a sudden plunge in cold water (causing constriction). Cigarette and marijuana smokers are more susceptible and prone to laryngospasm because their throats (vocal folds) are made more sensitive by the irritation of inhaled tobacco smoke. People who suffer from gastro esophageal reflux diseases (GERD), or dyspepsia (heartburn), where stomach acids are brought back up and irritate the throat, can also be predisposed to laryngospasm.



(a) Vocal folds in closed position; closed glottis (b) Vocal folds in open position; open glottis

However, it is not possible to die from laryngospasm, as long as there's air to breathe. As the oxygen level in the blood drops (hypoxia) and before the person loses consciousness, the muscles that have contracted the larynx will relax, opening the airway. Where the person can die is if they are face down or under water, and that renewed breathing sucks water into the lungs, resulting in drowning.

Most important is to not panic too much when laryngospasm occurs. I KNOW YOU HATE it because you cannot breathe, but next time you should try closing your mouth and breathing through your nose. Lifting the arms above your head can also help.

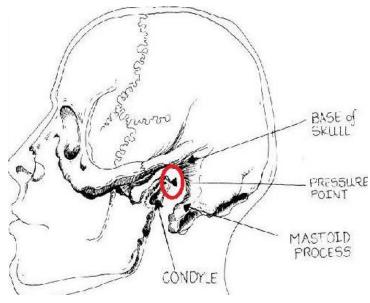
The very best plant for people who seem to have *chronic or reoccurring episodic laryngospasms* is none other than the *antispasmodic polycrest Cramp Bark* –

**Viburnum Opulus (embryonic stem bark)** 1:20. For prevention and treatment, adult dose is 25-50 drops 3 times daily. Always taken 15 to 30 minutes before meal into a little filtered water and SIP sublingually for most effective results. When acute, if readily available and if able to take anything by mouth at that moment, Cramp Bark can decrease by half the recovery time of any laryngospasm episode. For chronic sufferers, for whom this terrible condition is on the rise and is often caused by stress and the tightness it causes on the body, this plant untangles tight muscular fibers and spasms. Both Cramp Bark and Wayfaring Tree are the *polycrests* muscular relaxants and muscular sedatives, excellent for any related conditions of spasm and cramping.

On a side note, this plant is also the *polycrest* for *restless legs syndrome (RLS)* and the notorious night leg cramping they cause. For this indication you will need an adult dose of 30 drops 4 times daily with the 4<sup>th</sup> time always at bedtime. And when acute, a dropper full of Arnica - Arnica Montana (bud of flowers) 1:20 *topically only* will relieve within a minute any leg cramps - but it is not a long-term solution. However, after some time, Cramp Bark alone will be sufficient to prevent RLS – just be a little patient, as it does work well. Moreover, Cramp Bark and other *Viburnum* plants are excellent for the relief of *Fibromyalgia sufferers*. The adult dose is 25-50 drops (depending on severity and response) 4 times daily, as necessary.

A *polycrest* is a plant that can alone accomplish its perpetuated health claims and known benefits, whereas an *adjuvant* requires the help of other plants combined in order to be effective. Cramp Bark is known to have laxative effects in high doses, but is non-toxic. If this is unwanted, the best thing to do is to combine two *Viburnum species*: Cramp Bark – *Viburnum Opulus* (embryonic stem bark) 1:20 with Wayfaring Tree – *Viburnum Lantana* (buds) 1:20 at a reduced dose of 15-25 drops for each plant taken 4 times daily. What is most important is that you get the results you are looking to obtain, which is always dose dependent, *so choose the correct amount required wisely*.

#### For Physicians



The Awesome Laryngospasm Notch

The technique is so simple: apply firm cephalad and medial pressure in the laryngospasm notch (either one side or both sides). That is all! This maneuver will almost always break laryngospasm without any drugs, and it will do it very quickly in most cases. An additional benefit is that, even if the patient does not have laryngospasm, applying pressure in the notch will:

- Prevent laryngospasm from occurring.
- Increase the respiratory rate.
- Increase tidal volume at a time when many patients need a bit of stimulation (Larson, 1998).

#### **ASPIRATION VERSUS CHOKING**

Every year about 3,000 adults die because they accidentally inhale rather than swallow food. The food gets stuck and blocks their trachea, making breathing impossible. Death follows rapidly unless the food or other foreign material can be displaced from the airway. This condition is so common it has been nicknamed "cafe coronary."

#### What exactly happens when food goes down the wrong pipe?

*We have all been there:* you are sitting down having a pleasant meal, when suddenly, out of nowhere, your food goes the wrong way, down the wrong pipe. Very uncomfortable, annoying, and scary at the same time. It's the worst experience!

When swallowing correctly, liquid or solids will go down the esophagus into our stomach. This is because when our tongue propels the food down into our throat, the voice box (vocal folds) elevates to close off the trachea, or breathing "pipe." At the same time, the opening of our esophagus opens (which is normally closed to protect the contents of our stomach from pouring out each time we bend over). When a person feels like something went down the wrong pipe, it usually means that it went into his or her trachea, a process known as aspiration.

In healthy individuals, the presence of foreign material in the airway is extremely uncomfortable and will stimulate immediate gag and coughing reflexes. If these reflexes fail to clear the material, it may become lodged and obstruct the trachea, causing choking. Even when not choking, the food that travels down the trachea into the lungs *can lead to a serious ASPIRATION, causing pneumonia*.

#### So why does this even occur?

Most often it is caused by a cognitive issue: the person swallowing is not fully aware or awake or is distracted as they eat, which is why I have always recommended "Attentive Eating." It can also be caused by a physical problem, where someone has a sensation or motor abnormality. Furthermore, it can occur after a stroke or surgery on the throat. Aspiration occurs more frequently as we age, too, because our muscles do not respond as quickly and our sensation isn't as good as when we were young and vibrant.

#### Liquids are trickier than solid food.

You should also take into consideration that liquids are much harder to swallow than solids, simply because they move faster and are more difficult to manage. "When people are having swallowing problems, liquids are their nemesis. When people get life-

threatening pneumonia from aspiration it is more often caused by liquids, rather than by solids.

Even if you do not have any problems swallowing *per se*, it is a very good habit to be vigilant (cognitive) every time you drink.

#### Sometimes, the food is just stuck in the "right pipe."

Discomfort while swallowing can also be caused when food goes down whole the esophagus like it's supposed to — it's that feeling that something's caught in your throat, accompanied by an uncomfortable epigastric fullness in your upper chest or as high as in the throat neck area, but you can still breathe. If you're violently coughing, though, that's a good indication that the food did, in fact, go down the "wrong pipe," in your trachea.

This can also be caused by simply swallowing large particles of foods that were obviously not well-chewed.

# SO, WHAT SHOULD YOU DO WHEN ASPIRATION INTO THE WRONG PIPE OCCURS?

Immediately after you feel that something went down the wrong way, you feel like you cannot breathe and your voice is really constricted or you have no voice at all, because **everything goes into a restriction mode**, **shut-down**, **violation mode**. When your voice box senses that something went into your windpipe, it closes and shuts off, because there's been a "violation intruder." Often, there's more food or liquid coming, so it doesn't want anything else entering the windpipe (trachea).

AS A BYSTANDER watching a person who is experiencing a LARYNGOSPASM or CHOKING WITH OR WITHOUT ASPIRATION, **NEVER ASK THE INFAMOUS QUESTION, "ARE YOU OKAY?" THEY ARE VISIBLY** and **CLEARLY NOT OKAY**. Asking any questions during a time of such crisis, when a person is incapable of speaking, **puts them at a higher risk of complication**.

# AS A BYSTANDER, YOU CAN DO THE FOLLOWING TO HELP A VICTIM OF LARYNGOSPASM:

- 1. Refrain from asking them any questions.
- 2. Assist them by gently rubbing their back clockwise, not pounding on the chest.
- 3. Suggest to the victim to breathe through their nose.
- 4. Reassure them that everything will come to pass and that they will be fine.
- 5. If fainting, within minutes they should reanimate and return to normal.
- 6. If this persists any longer than 5 minutes, call 911. However, this rarely occurs in laryngospasm but can occur in choking or aspiration.

**VICTIMS OF CHOKING** should never be shy and afraid to cough their lungs off. Coughing is a natural protective mechanism by which you can clear your throat — and is probably the most important and effective thing to do when choking. Most of the time, coughing will get the entrapped food or liquid out of the trachea or out of the mouth or back down the right side into your esophagus without any further complication. And when feeling fine and back to normal, do not worry if you did not actually see or feel the food come up. You can also sip small amounts of water (or any liquid) to help this process along. Sipping

Cramp Bark 30 drops into a little water will serve to sedate and relax the contraction and coughing spasm more quickly than letting it run its course.

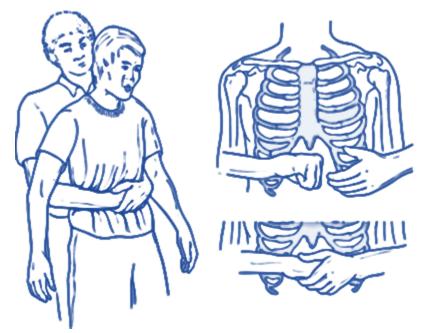
Once your body knows that you have gotten everything out of the airway, you should stop coughing, but some coughing spasms may continue from overexertion, which Cramp Bark can alleviate. You now should start breathing normally, and the return of your voice will be apparent if it was scratchy or restricted during the incident.

#### BYSTANDERS – WHAT CAN YOU DO TO HELP A CHOKING VICTIM:

- First is to always refrain from asking are you okay they are obviously NOT. NEVER engage in asking too many questions that requires a vocal response. You could say something like, "DO NOT TALK but *give me a sign with your head if* you want me to call 911?"
- Only give physical assistance if you know what to do.

# The Red Cross recommends a "five-and-five" approach to delivering first aid to choking victims:

- First, give 5 back blows between a person's shoulder blades with the heel of your hand.
- Next, give 5 abdominal thrusts (also known as the Heimlich Maneuver).
- Alternate between 5 blows and 5 thrusts until the blockage is dislodged.



To perform abdominal thrusts – THE HEIMLICH MANEUVER – on someone else:

- Stand behind the person. Wrap your arms around the waist. Tip the person forward slightly.
- Make a fist with one hand. Position it slightly above the person's navel (between the navel and the sternum *but not on* the sternum.

- Grasp the fist with the other hand. Press hard (pull back) into the abdomen with a quick, upward thrust as if trying to lift the person up.
- Perform a total of 5 abdominal thrusts, if needed. If the blockage still is not dislodged, repeat the five-and-five cycle once more.

If you're the only bystander/rescuer, perform back blows and abdominal thrusts before calling 911. If another person is available, have that person call for help while you perform first aid.

#### TO CLEAR THE AIRWAY OF A PREGNANT WOMAN OR OBESE PERSON:

- Position your hands a little bit higher than with a normal Heimlich Maneuver, at the base of the breastbone, just above the joining of the lowest ribs.
- Proceed as with the Heimlich maneuver, pressing hard into the chest, with a quick thrust.
- Repeat until the food or other blockage is dislodged or the person becomes unconscious.

#### TO CLEAR THE AIRWAY OF AN UNCONSCIOUS PERSON:

- Lower the person to the floor on his or her back.
- Clear the airway. If a blockage is visible at the back of the throat or high in the throat, reach a finger into the mouth and sweep out the cause of the blockage. Be careful not to push the food or object deeper back into the airway, which can happen easily in young children.
- If necessary, perform a standard CARDIOPULMONARY RESUSCITATION (CPR) with chest compressions and rescue breaths. This is best when there are two persons.

### TO CLEAR THE AIRWAY OF A CHOKING INFANT YOUNGER THAN AGE 1:

- Assume a seated position and hold the infant face down on your forearm, which is resting on your thigh.
- Thump the infant gently but firmly five times on the middle of the back using the heel of your hand. The combination of gravity and the back blows should release the blocking object.
- Hold the infant face up on your forearm with the head lower than the trunk if the above doesn't work. Using two fingers placed at the center of the infant's breastbone, give five quick chest compressions.
- Repeat the back blows and chest thrusts if breathing doesn't resume. Call for emergency medical help.
- Begin infant CPR if one of these techniques opens the airway but the infant doesn't resume breathing.
- If the child is older than age 1, give abdominal thrusts only.

To prepare yourself for these events, learn the Heimlich Maneuver and CPR in a certified first-aid training course.

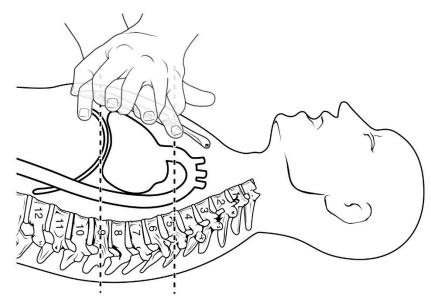
#### WHAT CRITERIA CONSTITUTES CALLING 911

The universal sign for choking is hands clutched to the throat. If the person does not give the signal, look for these indications:

- Inability to talk
- Difficulty breathing or noisy, labored breathing
- Inability to cough forcefully
- Skin, lips, and nails turning blue, or dusky
- Loss of consciousness

The moral of the story: practice ATTENTIVE EATING while eating or drinking, and do not fight an urge to cough. However, when having chronic swallowing problems, consult with a gastroenterologist or perhaps an ENT doctor.

**THE BASIC PROCEDURE FOR CPR** is the same for all people, with a few modifications for infants and children to account for their smaller size.



### PERFORMING CPR ADULT.

#### THE FIRST STEP IS TO CALL 911

#### THEN IS TO IMMEDIATELY BEGING CPR

#### Following these steps:

- The rescuer opens the victim airway by placing the head face up, with the forehead tilted backward and the chin is lifted upward. The rescuer checks again for breathing (three to five seconds), then begins rescue breathing (mouth-to-mouth artificial respiration), pinching the nostrils shut while holding the chin in the other hand. The rescuer's mouth is placed against the unconscious person's mouth with the lips making a tight seal, then gently exhales for about 1 to 2 and 2 ½ seconds.
- The rescuer breaks away for a moment and then repeats. The person's head is repositioned after each mouth-to-mouth breath.
- After 2 breaths, the rescuer checks the unconscious person's pulse by moving the hand that was under the person's chin to the artery in the neck (carotid artery) and

check if the unconscious person has a heartbeat, the rescuer continues rescue breathing until help arrives or the person begins breathing without assistance. If the unconscious person is breathing, the rescuer turns the person onto his or her side.

- If there is no heartbeat, the rescuer performs chest compressions. The rescuer kneels next to the unconscious person, placing the heel of one hand in the spot on the lower chest where the two halves of the rib cage come together has demonstrated in the figure above. The rescuer puts one hand on top of the other on the person's chest and interlocks the fingers. The arms are straightened, the rescuer's shoulders are positioned directly above the hands on the unconscious person's chest. The hands are pressed down, using only the palms, so that the person's breastbone sinks in about 1½ to 2 inches. The rescuer releases pressure but never removing their hands, then repeats about 15 times with 10-15 seconds interval in between.
- The rescuer tilts the unconscious person's head and returns to rescue breathing for one or two quick breaths. *Then breathing* and *chest compressions are alternated for one minute before checking for a pulse*. If available a second person can do the time with a clock or watch if available. *If the rescuer finds signs of a heartbeat and breathing, CPR is discontinued*. If the unconscious person is breathing but has no pulse, then only the chest compressions are continued. If the unconscious person has a pulse but is not breathing, rescue breathing is continued.

For children over the age of 8, the rescuer performs CPR exactly as for an adult.

**PERFORMING CPR ON AN INFANT OR CHILD UNDER THE AGE OF 8**. The procedures outlined above are followed with some differences:

- The rescuer administers CPR for one minute, then calls for help.
- The rescuer makes a seal around the child's mouth or infant's nose and mouth to give gentle breaths. The rescuer delivers 20 rescue breaths per minute, taking 1 <sup>1</sup>/<sub>2</sub> -2 seconds for each breath.
- Chest compressions are given with only one hand for a child and with two or three fingers for an infant. The breastbone is depressed only 1 to 1 ½ inch for a child and ½ to 1 inch for an infant, the rescuer gives at least 100 chest compressions per minute.

#### **NEW DEVELOPMENTS IN CPR**

Some new ways of performing CPR have been tried. Active compression-decompression resuscitation, abdominal compression done in between chest compressions, and chest compression using a pneumatic vest have all been tested but none are currently recommended for routine use.

The active compression-decompression device was developed to improve blood flow from the heart, but clinical studies have found no significant difference in survival between standard and active compression-decompression CPR. Interposed abdominal counter pulsation, which requires two or more rescuers, one compressing the chest and the other compressing the abdomen, was developed to improve pressure and therefore blood flow. It has been shown in a small study to improve survival but more data is needed. A

pneumatic vest, which circles the chest of an unconscious person and compresses it, increases pressure within the chest during external chest compression. The vest has been shown to improve survival in a preliminary study but more data is necessary for a full assessment.

#### Preparation

If a person suddenly becomes unconscious, a rescuer should call out for help from other bystanders, and then determine if the unconscious person is responsive by gently shaking the shoulder and shouting a question. Upon receiving no answer, the rescuer should call the emergency medical system. The rescuer should check to see whether the unconscious person is breathing by kneeling near the person's shoulders, looking at the person's chest, and placing a cheek next to the unconscious person's mouth. The rescuer should look for signs of breathing in the chest and abdomen, and listen and feel for signs of breathing through the person's lips. If no signs of breathing are present after three to five seconds, CPR should be started.

### EMERGENCY MEDICAL CARE IS ALWAYS REQUIRED and NECESSARY AFTER SUCCESSFUL CPR.

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