

Speech Pathology Treatment for Chronic Cough Patient Education Material

This handout is specifically designed for patients who experience chronic cough and excessive throat clearing. The aim is to give you information to help you manage your cough. This material is not a substitute for intervention provided by a qualified speech pathologist.

The following diagram (figure 1) shows a picture of the larynx which is sometimes referred to as the ‘voice box’.

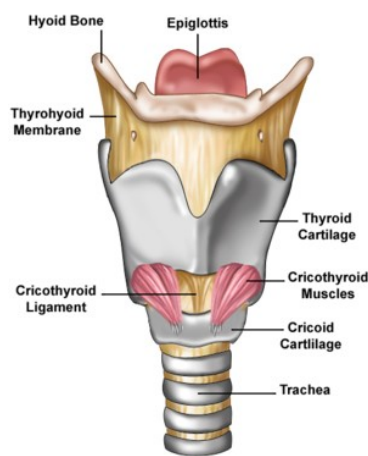
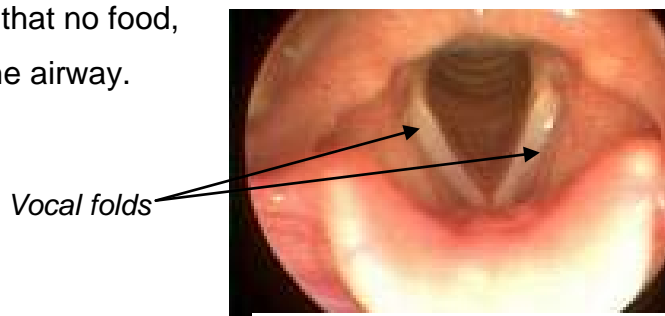


Figure 1. Larynx

you would see the vocal folds (figure 2). The vocal folds open to breathe and air can freely pass through the vocal folds in this position. The vocal folds close when we speak. Air passes through the closed vocal folds and creates a vibration, which causes voice to occur. When you cough, or clear your throat, the vocal folds slam together. This can be very damaging to the vocal folds if you cough

or clear your throat constantly. When you swallow, our vocal folds also close but they do so with a gentle movement. They close so that no food, drink or saliva can enter the airway.

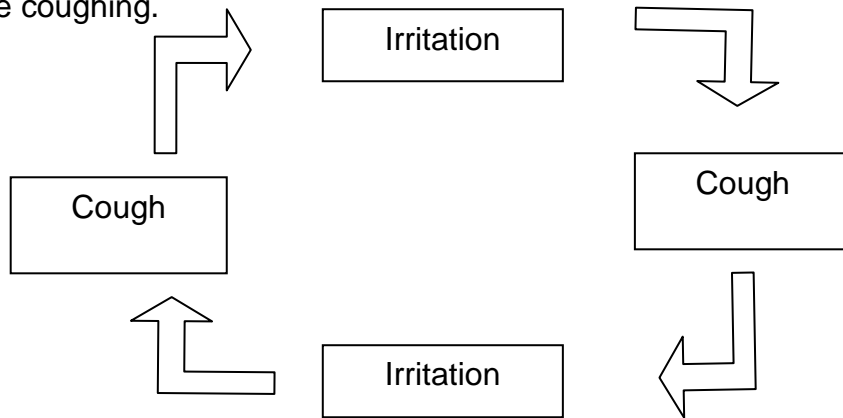


*Figure 2
Vocal folds in open position*

Six facts about cough

Fact one.

A cough can be triggered by irritation of larynx, throat or tubes leading to the lungs. A large number of people also cough deliberately in response to irritation in the throat. Coughing can become a viscous cycle where irritation leads to coughing, coughing causes more irritation and this irritation leads to more coughing.



Fact two.

A cough protects the body by clearing the lungs and tubes of things that irritate the body and secretions such as phlegm and mucous. Therefore in some cases your cough is beneficial to your body. This is particularly true when you have swallowed food down the wrong way or when you have a chest infection.

Fact three. However your cough is not always necessary. In the case of chronic cough the cough is often occurring in response to irritation rather than

The feeling is real but the
need to cough is not.

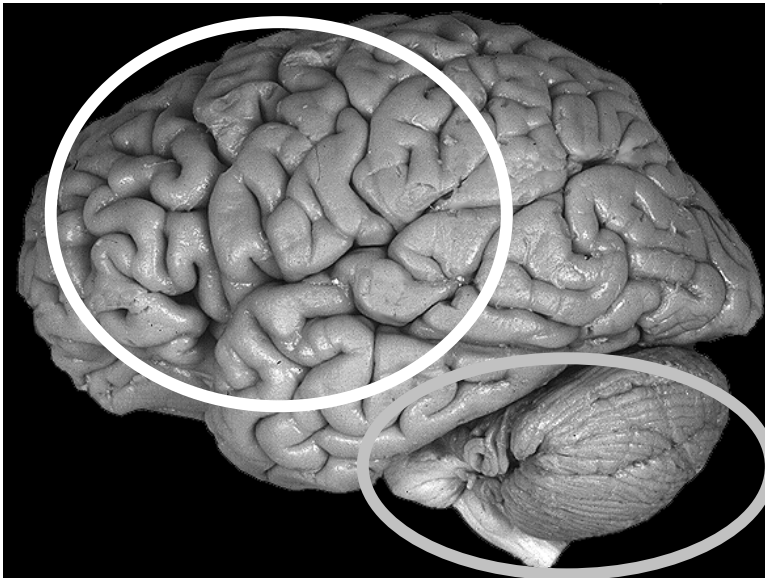
Dr. Florence Elager, 2005

because anything needs to be cleared from your lungs or chest. In other words there is no benefit to coughing. In fact there are a lot of negative side effects to coughing such as

increasing throat irritation and urinary incontinence.

Fact four. Coughing is both automatic and under conscious control.

Coughing, like everything else we do, is controlled by the brain. The picture below shows the brain. The brain is made up of many different sections. The



bottom section, shown circled in grey controls all the automatic functions of our body. These functions include breathing, keeping our body at the right temperature. This part of the brain is called the medulla

and is the main part of the brain involved in coughing. The top section of our brain, which is circled in white is responsible for all our conscious actions.

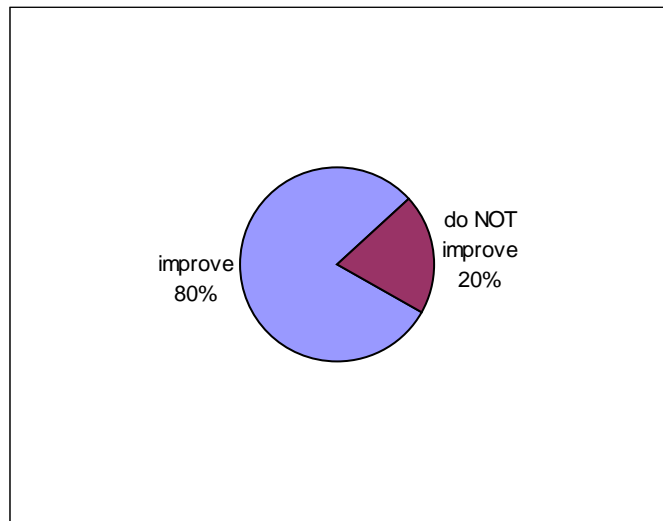
These actions can include walking, talking, writing a check, driving a car, playing golf, thinking etc. This section is called the cerebral cortex. Research has shown that the cerebral cortex is also activated when we cough. So although coughing often occurs automatically there is still an element of conscious control. That is why we can suppress a cough at times and why we can cough deliberately. In speech pathology treatment we aim to strengthen your voluntary control of cough.

Fact five.

The most common causes of cough are asthma, gastroesophageal reflux, post nasal drip, eosinophilic bronchitis, smoking, lung pathology and vocal cord dysfunction. In approximately 10% of patients no cause can be found. Speech pathology intervention is designed for patients who 1) have no known cause for their cough, 2) have vocal cord dysfunction, and 3) have cough persisting despite treatment for asthma, rhinitis and gastroesophageal reflux.

Fact six.

Medical treatment is effective for most people with chronic cough. In fact 80% of patients with chronic cough are helped by medical treatment. However 20% of people with chronic cough are not helped. In other words for every 100 people with chronic cough, 80 will improve and 20 will not improve after medical treatment. It is this group that benefit from speech pathology treatment.



Two ways that speech pathology treatment can help your cough. There are two ways that speech pathology treatment can help your cough. The first is by increasing conscious control over your cough. The second is to reduce the irritation that triggers coughing.

- 1. Increase conscious control over the cough.** The first component of treatment is to increase the ability to voluntarily control the cough. Although irritation may build up in the throat it is still possible to control the cough. It is also possible to control or suppress the cough when you feel that something needs to be coughed up.
- 2. Reduce the irritation that triggers coughing.** The second component of treatment is to reduce the degree of irritation in your throat and airway. A cough is triggered once irritation builds up to a certain level. Increasing irritation can trigger a cough whereas reducing irritation reduces coughing. So if the rate of irritation can be slowed then a cough is less likely to be triggered. There are several strategies for reducing irritation, which will be described in the following section. So the aim of this component of treatment is to slow the rate of irritation in the throat.

Speech pathology treatment has been proven to be beneficial for people with chronic cough. A large study examined 87 patients with chronic cough. These people had cough that persisted despite extensive medical treatment. These patients were randomly selected to receive either the speech pathology treatment or a placebo intervention. Of those who received the speech pathology treatment, 88% improved whereas 14% of those who received the placebo intervention improved (see figure 3).

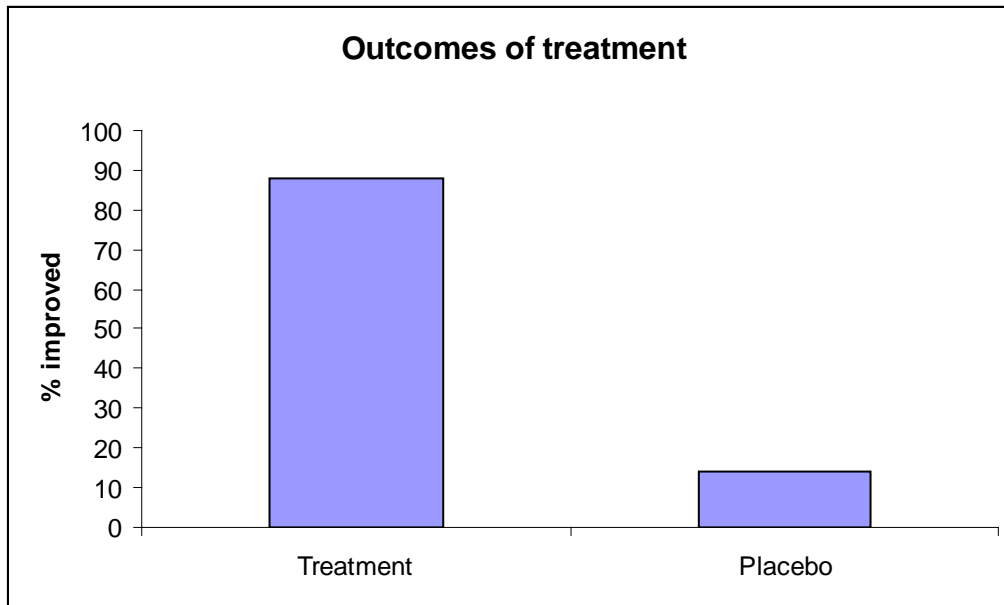


Figure 3
Outcomes of speech pathology treatment for chronic cough

Increase conscious control over coughing

- Remember you can control your cough. It is physically possible to voluntarily control chronic coughing.
- The cough can be suppressed – even if you feel the need to cough something up.
- In order to suppress your cough you will need to work out what happens before you actually cough. For example, do you notice a tickle in the throat or become short of breath?
- The aim is to prevent the cough by replacing the cough with one of the breathing or cough suppression exercises. (Your speech pathologist will give you more details about the exercises that are suitable for you)..

Throughout the day your throat may vary between having (1) no irritation, (2) mild irritation but not enough to cause coughing, or (3) irritation enough to cause coughing. You need to do your exercise when the irritation is mild – even if you have to interrupt what you are doing. Don't wait until the irritation is severe enough to cause coughing.

Please note that the exercises will only work if you remember to do them at the very first sign of irritation in your throat. It is a good idea to practice the exercises during cough free periods until you are confident that you have mastered the technique. Then the onus is on you to do the exercise when you notice irritation.

Seven ways to reduce irritation that causes coughing

1. Drink adequate quantities of water

If you are not well hydrated your vocal folds will have to work a lot harder whenever you talk. Drinking adequate water will also promote healing and reduce risk of injury. Many people with chronic cough are poorly hydrated.

- Aim to drink at least 2 litres of water a day
- You need more water during hot weather and exercise
- Drink water frequently throughout the day e.g. take small sips
- Drink water when your throat feels irritated
- If you don't like water try adding small amounts of lemon, lime or orange juice, mint leaves, experiment with different temperatures.

2. Breathe through your nose

Your nose has three important functions. Your nose

- warms the air
- cleans the air
- humidifies the air

So if you breathe through your nose the air will be warm, clean and moist when it reaches your throat and lungs. However if you breathe through your mouth the air will be cold, dirty and dry. It is no surprise that cold, dry and dirty

air causes irritation. Therefore breathing through your nose will reduce irritation. It can be difficult to breathe through your nose if you are in the habit of mouth breathing. The best strategies are to breathe through your nose whenever you think of it.

3. Minimise intake of dehydrating substances

- Substances containing alcohol (e.g. wine, beer and spirits) and caffeine (e.g. tea, coffee, cola) are very drying and can increase irritation that leads to coughing.
- It would be ideal to eliminate these altogether until you get your cough under control however it can be sufficient to reduce your intake to 2-3 cups of caffeine a day.



4. Lifestyle strategies for reflux

- Raise the head of your bed when sleeping
- Some foods such as chocolate, spicy food, fatty food, caffeine and alcohol can trigger reflux
- Being overweight can trigger reflux
- Eat smaller meals rather than larger meals
- Avoid eating or drinking before going to bed

5. Inhale steam

Research has shown that inhaling steam adds moisture to the surface of your vocal folds. This promotes healing and reduces the risk of injury.

- Fill your kitchen sink with boiling water
- Place a towel over your head
- Breathe in steam
- Do not add anything to the water. Most substances that you add to the water will cause dryness and irritation.

6. Suck on non-medicated lozenges

Sucking on non-medicated lozenges causes you to produce more saliva and swallow more frequently, which can be very soothing to the throat as it. Avoid

medicated cough lollies particularly those containing menthol can be drying to the throat and should be avoided.

7. Avoid exposure to smoke

Smoking is extremely irritating and damaging to the larynx. Smoking is one of the leading causes of cancer in the lungs and larynx. Smoking is also very



drying and irritation in the larynx. Reducing exposure to smoking and smoky environments can reduce irritation.

Other important points to remember

- There is no easy cure.
- Treatment is hard work and will require considerable commitment from you.
- Although the speech pathologist can explain how to stop the cough, no-one else can stop the cough for you.
- The cough usually won't go away overnight. In fact it can take two to three months before you feel more in control of your cough.
- Some people require more specific throat and breathing exercises to assist gain control over their cough. Your speech pathologist will monitor your progress and alter your program accordingly.

Speech Pathologist: _____

Telephone: _____