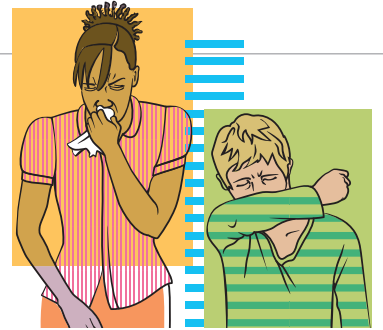


# Cough

When air passes out through our voice box with force, a sound is made that we all recognize as a “cough”. The act of coughing usually begins with a deep breath in, followed by air leaving the mouth with force. A cough is your body’s way of preventing material from entering your breathing tubes (airways) and clearing mucus or foreign material from your airways. Cough is the most common complaint for which patients seek medical care.



A cough is not a disease, but can be a common symptom of different upper and lower respiratory tract diseases. Even if you do not have a lung disease, you may cough.

## What causes a cough?

A cough can happen when something irritates your nerve endings, called cough receptors. These nerve endings are in many areas inside your body, from your head and neck area, to just above your navel (belly button). Inhaling particles, vapors, smoke, fumes, dust, or cold air may irritate these receptors and may make you cough.

## Can a cough spread infection?

Cough can be a way of spreading infection to others. Influenza (the flu) and tuberculosis (TB) are examples of infections that can be spread by coughing infected droplets into the air. While a cold virus (the common cold) can be passed on to others by coughing, cold viruses are much more likely to be spread to others by hand to nose contact. Hand-to-nose contact is when you shake hands with someone who has the infection or touch something that has the cold virus on it and then you touch your nose or eyes.

To help decrease the spread of infection, you should:

- Cover your mouth and nose with a tissue when coughing or sneezing. You don’t want to spread germs to others.
- When a tissue is not available, cough or sneeze into your upper sleeve or elbow, not your hands.
- Dispose of used tissues into a waste basket.
- Avoid spitting as it can cause a mist that may infect others.
- Ask for and wear a facemask when entering a healthcare facility if you are coughing or have cold symptoms.
- Wash your hands often and for at least 20 seconds using soap and water.
- Use an alcohol-based hand rub (sanitizer) when soap and water are not available.

## Is there anything special that I should know about my cough?

If you have a cough, keep track of how long you have been coughing. Your healthcare provider may also ask questions about whether or not it is wet or dry, or whether it wakes you from sleep, but research suggests that this information may not help determine the true cause of cough. We do know, though, that a forceful cough can lead to vomiting. A respiratory infection that is typically associated with coughing

that provokes vomiting is called pertussis (whooping cough). Such a cough-vomit syndrome, according to the CDC, should alert one to the possibility of pertussis. For more information on whooping cough, see the ATS patient information series piece “Pertussis” at [www.thoracic.org/patients/](http://www.thoracic.org/patients/).

## Acute, Sub-acute and Chronic Cough

There are three time periods to use as you describe how long you have had your cough: acute (lasts less than 3 weeks), sub-acute (lasts 3 to 8 weeks) or chronic (lasts more than 8 weeks and does not let up).

- An acute cough is most often caused by the common cold. This cough slowly starts to improve by the third to fifth day. Cough from the common cold usually is not a serious threat to health and usually does not last longer than 14 days. People with a cold typically also complain of nasal stuffiness, runny nose, throat clearing, and a sore or scratchy throat. They also may feel like they have mucus dripping down the back of their throat. Acute cough can also be due to inhaling irritants such as pollens or strong fumes. Cough may be the first symptom of inadequate control of asthma. Less commonly, an acute cough can be due to more serious conditions such as pneumonia or heart failure.
- A sub-acute cough most commonly happens after a respiratory infection (often from a virus). Other common reasons for a sub-acute cough are: whooping cough (pertussis) and flare ups of conditions such as asthma, chronic bronchitis, sinusitis or bronchiectasis. When a cough starts to get better but then worsens, you should see your healthcare provider.
- A chronic cough can happen to you for many reasons. Often, it is a combination of reasons that explain why you are coughing. Chronic cough can happen from upper airway conditions such as inflammation (swelling) of the membranes inside the nose (rhinitis) and sinuses (sinusitis) as a result of allergies or infections or from poorly controlled asthma. Cigarette smoking can cause chronic bronchitis and result in a chronic cough. Gastroesophageal reflux disease (when contents from the stomach backup into the esophagus) can also be a cause of chronic cough.

## When should I contact my healthcare provider about my cough?

Any time that your cough concerns you, you should discuss

it with your healthcare provider. It is very important that you contact your healthcare provider if:

- You spit up blood when you cough.
- You have chest pain or trouble breathing when you cough.
- Your coughing makes you vomit.
- You have an unexplained weight loss.
- Your cough began after you were in close contact with someone who has whooping cough.
- Your cough lasts more than 8 weeks.
- Your cough starts to get better and then gets worse.
- If you have a lung problem such as asthma or cystic fibrosis (CF) and have frequent or chronic cough, you should talk to your healthcare provider if the pattern of the cough changes.

#### When might I need specialist care?

Your primary healthcare provider often will be able to answer your questions about your cough. If your primary healthcare provider is unable to find the reason for your cough or find solutions to reduce your cough, you may be referred to a lung specialist (pulmonologist). If the pulmonologist cannot explain or find the cause of your cough, you should ask to be referred to a cough specialist. Sometimes, a complete evaluation of your cough may include more than just your respiratory system. You may, for example, need an evaluation of your gastrointestinal (GI) tract. You may also need to see an otolaryngologist (specialist who deals with the nose, sinuses, ears, and throat).

#### Frequently asked questions about cough

*Can medications cause cough?* Yes, some medications can cause you to cough. A common cause is from a category of drugs called angiotensin converting enzyme inhibitors, also referred to as "ACE inhibitors". These drugs are commonly given for high blood pressure or heart failure. If you start coughing after you start a new medicine, tell your healthcare provider.

*Should I take over-the-counter cough medications?* Over-the-counter (OTC) cough and cold medications are drugs that you can buy without a prescription. For this reason, you should discuss using them with your healthcare provider before using them. In adults, if you choose to use OTC medications for cough due to the common cold, the use of one of the antihistamines such as diphenhydramine, brompheniramine or chlorpheniramine or a non-steroidal anti-inflammatory drugs (NSAID) may be tried for a common cold as long as there is no reason why you should not take them. These drugs can cause side effects or problems for some people, such as an allergy, possible drug interaction, or other health problem. For example, for those with glaucoma, chlorpheniramine or brompheniramine can cause problems with glaucoma or an enlarged prostate. NSAID medications such as ibuprofen or naproxen can cause kidney problems or stomach irritation or worsen other health problems such as heart failure. If you take an OTC cough medicine and your cough does not get better or you begin to feel worse, contact your healthcare provider.

Since 2008, the US FDA has recommended that cold and cough products **not be used** in children under the age of 2 because of the risk of serious and potentially life-threatening side effects. The Consumer Healthcare Products Association (CHPA) representing most of the manufacturers of these OTC products volunteered to modify the product labels of OTC cough and cold medicines to state "do not use" in children under 4 years of age.

*Are there any vaccines that can help prevent cough in adults?* Yes, consider getting the influenza (flu) shot each year. Those with allergies to eggs should speak to their healthcare provider before getting this shot. Other important vaccines for adults include the pneumonia (pneumococcal) shot and the whooping cough vaccine. Ask your healthcare provider if and when you should get these shots. For more information on these vaccines, see the ATS Patient Information Series at [www.thoracic.org/patients/](http://www.thoracic.org/patients/).

*Is there one treatment that will stop my cough?* While one treatment might work, several medications may be needed. If you have a chronic cough, you may need to use several medications to address each condition causing the cough.

*What should I do if I am told to "live with" my chronic cough?* You should ask your healthcare provider for a referral to someone who specializes in the care and treatment of chronic cough. With some chronic conditions, such as bronchiectasis, Interstitial Lung Disease (ILD), or CF, you may have a daily cough. If the cough changes or worsens over time, or negatively impacts your quality of life, talk to your healthcare provider about a referral to a center that specializes in the evaluation and treatment of cough.

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#### Selected Resources:

**Centers for Disease Control and Prevention. Cough.**

<http://www.cdc.gov/flu/protect/covercough.htm>

**National Institutes of Health. Cough**

[http://www.nlm.nih.gov/health/dci/Diseases/cough/cough\\_what.html](http://www.nlm.nih.gov/health/dci/Diseases/cough/cough_what.html)

**FDA'S Consumer Update**

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm048682.htm>

<http://www.fda.gov/Drugs/ResourcesForYou/SpecialFeatures/ucm263948.htm>

**Treatment of Unexplained Chronic Cough: CHEST Guideline and Expert Panel Report.**

Gibson P, Wang G, McGarvey L, Vertigan AE, Altman KW, Biring SS; CHEST Expert Cough Panel.

*Chest.* 2016 Jan;149(1):27-44.

## Rx Action Plan

- ✓ Contact your health care provider if you spit up blood, blackout, have trouble breathing, have unexplained weight loss, develop sharp pain when you cough, if your cough that did not come on after a respiratory infection has lasted longer than 3 weeks, or if your cough lasts longer than 8 weeks or causes you concern.
- ✓ Cover your nose and mouth whenever you cough or sneeze.
- ✓ Do good handwashing regularly.
- ✓ Do not smoke and avoid contact with secondhand smoke, strong fumes and air pollution.

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