

The Common Cold

What is an infection?

An infection is the invasion of some part of the body by a “*germ*.” Germ is a general term for all types of viruses, bacteria, fungus and yeast that can grow and multiply in your body causing damage and symptoms. Bacteria that normally inhabit the body are not considered an infection.

What is a virus?

A virus is a very small fragment of genetic material (DNA or RNA), with a protein coat. They are much too small to be seen by a regular light microscope. This lump of genetic material does not need oxygen or water. It cannot move by itself or produce energy. Viruses are not living cells. Viruses, however, can penetrate and control living cells.

There are hundreds of known viruses. Common viral diseases include measles, mumps, German measles, chickenpox, shingles, herpes, viral hepatitis, mononucleosis, influenza, smallpox, rabies, HIV, polio, warts, West Nile fever and the common cold.

Outside of the body, viruses are inert and inactive. They are not living organisms ... *so you can't kill them!* This is why there are so few treatments for viruses and antibiotics won't kill them. Viruses are highly contagious though and, *if you catch what is going around, you have a virus.*

What are bacteria?

Bacteria are living cells hundreds to thousands of times larger than viruses. They can be seen under a common microscope. Bacteria produce energy and reproduce on their own. They have cell walls and complicated internal structures and are living microorganisms. The best known bacteria are streptococcus (strep) which causes strep throat and Staphylococcus (Staph) which causes boils. There are many others. Everyone has lots of bacteria normally living on the skin, in the nose and mouth and in our intestines.

What are antibiotics?

Antibiotics are chemicals that inhibit the growth of or kill bacteria *inside* the body. (Antiseptics kill germs *outside* of the body). The word *antibiotic* comes from Greek ... *anti* meaning against and *bios* meaning life. Thus, antibiotics are against or destructive of life. They kill living organisms (bacteria) but do not kill non-living viruses.

Antibiotics have a range or spectrum of abilities. No one antibiotic kills all bacteria so each is unique. Some antibiotics are capable of killing many different types of bacteria

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while others only kill a few. Therefore, an antibiotic appropriate for one infection may not be useful for another. Antibiotics work by disrupting some part of the bacteria. For example, some poison the bacteria's energy system while others destroy the cell wall.

What is a "Cold"?

A "cold" is a layman's term for an *upper respiratory infection* or URI (the medical term is just as imprecise). All colds are caused by viruses, some 300 of them. The average child gets a cold about three to six times per year while an adult gets 2 to 4 per year. If you get sick every three to four months, then you are normal.

When people sneeze or cough, they spray cold viruses in the air. These settle on door knobs, table tops, money ... anything. If you touch these things with your hands and then touch your eyes or your nose, the virus is transferred. You do not get a cold from hand to mouth transfer.

The symptoms of a cold can vary, but a typical cold begins with a mild to severe sore throat that can last for 1 to 5 days. Viruses invade throat cells and force them to make more viruses. These viruses in turn spread to nearby cells. In this way, your cold symptoms will evolve and change over several days as the viruses spread from one cell to the next. As they go up into your nose you develop a stuffy, runny nose with post nasal drip. As they go into your trachea and upper chest your body responds with cough or a hoarse voice. Different people with the same virus may have different symptoms.

Fatigue or tiredness and *malaise*, a vague feeling of bodily discomfort, are very common. Any viral infection will make you tired, not just the flu or mononucleosis.

You spend spend one to three days getting sick (changing and evolving symptoms as the virus moves around), four to six days being sick and three or more days getting better. A typical cold lasts for 7 to 14 days. The residual cough and sniffles can last a month.

Your cold symptoms your body's reaction to the virus, not the virus itself. Some people have a stronger response and more symptoms. Others heal with less reaction and a short, easier illness. Perhaps research should look into changing the immune system so that you react in a kinder, gentler fashion.

How can I prevent a cold?

You can't! There is no known way to prevent a cold. There are no cold vaccines and vitamin C is overrated. Contrary to myth, colds do not come from exposure to bad weather but we often see people becoming sick after they get wet and cold. Why? Well, we are exposed to viruses all the time but most of the time we do not get sick. Our immune system handles the problem. When physically stressed (cold, wet and tired) or

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mentally stressed, our immune system is depressed and the virus is able to start an infection. It may well be that the best way to prevent a viral cold is a good, strong immune system. If you work with or have small children, especially if they are in daycare, you will get sick often.

How long am I contagious?

You are spreading cold viruses for one to two days *before* your symptoms begin and for probably three to five days afterward.

What do cough and cold medicines do for me?

They don't cure you! None of the over-the-counter (OTC) or prescription cough and cold medicines will cure your cold. They do not kill viruses. Use them to relieve symptoms but don't expect to get well faster.

What do I do for congestion?

The mucous membranes of your nose and sinuses react to the viral infection by swelling up and making mucous. This swelling narrows the airway making it harder to breath. If your membranes are *congested* then you may want a *decongestant*.

The most widely used decongestant is *pseudoephedrine* (the generic name) perhaps best known as *Sudafed*. This decongestant shrinks the swollen membranes. This can come at the price of rapid or forceful heart beat with palpitations, an elevated blood pressure, tremors, nausea or loss of appetite, anxiety, poor sleep, vivid dreams and especially in men, difficult urination. People vary in their sensitivity to decongestants. Regular caffeine users have habituated their bodies to stimulants and have fewer side effects. If you are one of the sensitive people, then you may need only a child's dose. If you have *untreated* and *uncontrolled* hypertension, decongestants may be dangerous.

Pseudoephedrine is about the only oral decongestant on the market now.

Phenylpropanolamine was taken off the market several years ago because it caused strokes in young women. Pseudoephedrine is the ingredient in both OTC and prescription decongestants.

Decongestants can also come in nose sprays such as Afrin and Neo-synephrine. They are powerful and work fast ... but, as with all medications, this can come at a price. The decongestant effect is so intense that your body tries hard to overcome it. When the decongestant wears off your mucous membranes can swell even more than before. Your nose can become "*hooked*" on nose sprays if you use them for more than three days. Use them cautiously, if at all.

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What about something to thin the mucous?

Thick, sticky mucous blocks up the nose, lungs and sinus passages and can be hard to get out. There is only one chemical on the market routinely sold to thin mucous. This is *guaifenesin* (pronounced goo-why-fen-e-sin). This is an odd word for the chemical that was first sold as *Robitussin* and is made from *creosote* (yep, the same black stuff used to preserve wooden telephone poles). It has been used for more than 70 years.

Guaifenesin is used in countless cough syrups and prescription tablets. Our country consumes tons of guaifenesin each year but surprisingly it has never been shown in studies to work! People feel that it helps, it is very safe and it is the only thing available so we keep using it.

You can liquefy the mucous much better with a vaporizer, a steam room, saline (salt water) spray into the nose, drinking lots of fluids or eating hot peppers.

What should I take for the cough?

There are many reasons that you may cough. When the infection invades the lining of the trachea and upper airways, you may respond by producing mucous. You would then cough to get this mucous out. However, the inflammation and irritation alone can cause a dry cough without any mucous. There is nothing to come up so taking a mucous liquefier is useless. You can't liquefy something that isn't there.

If you feel a tickle in your throat, this is due to irritation. The only way you can "scratch" this tickle is by forcing air past the irritation at high speed ... coughing. Unfortunately, just like an itch on the skin, the more you scratch the more it can itch. This may lead to coughing spasms. Severe coughing can cause vomiting, strained chest or abdominal muscles, urine leakage, hemorrhoids and headaches. You want to suppress this type of cough.

You may also cough without any lung infection because of post nasal drip. This is a frequent cause of nighttime cough. The drainage holes for the maxillary (cheek) sinuses are towards the back of your head and not at the bottom of the sinuses. When you lie down they start draining and then you cough.

Most OTC cough medications contain guaifenesin and *dextromethorphan* (often abbreviated DM on the bottle), a synthetic, mild narcotic cough suppressant. For most people this is all you need. The usual preparations such as *Robitussin DM* work for about four hours. *Delsym* works for about 8 to 12 hours.

For severe coughs, your doctor may prescribe *codeine* or *hydrocodone* (*Histinex*, *Histussin*, *Tussionex*). Both work well but can be highly addictive and abused. Do not expect automatic refills of these without being seen by the doctor.

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As a rule of thumb, *if the cough is productive take an expectorant to further loosen the phlegm and get it out. If the cough is dry or unproductive, take a cough suppressant.*

When you think about it ... it the mucous liquefier worked perfectly and made lots of mucous and the cough suppressant worked perfectly to stop your cough ... *you would drown in your own secretions!*

What are the complications of a cold?

The viral infection may weaken your immune system and allow bacteria to complicate the cold causing ear infections and sinusitis. According to the Center for Disease Control in Atlanta (CDC), bronchitis is almost always viral and not bacterial. Most bacterial complications do not occur until you have been sick with the virus for seven to ten days. Look for what is called a “*double sickening*”, that is, the usual cold symptoms lasting for a week with gradual improvement followed by a sudden worsening ... a second illness. You will not prevent complications by starting an antibiotic early ... you may just create bacteria resistant to that antibiotic.

Another common complication of a cold is asthma. The infection triggers spasm in your airways leading to wheezing, cough and shortness of breath.

When should you see the Doctor?

The doctor cannot cure your virus. If you have the typical sore throat for a few days, followed by head congestion and then a cough, you have a typical viral cold. Take OTC medications for your symptoms and keep on going.

See the doctor if you have a high fever, shaking chills, severe sore throat without any nose or chest symptoms, wheezing, shortness of breath, chest pain, earache, severe facial pain or pressure, or green or brown mucous.

Summary on treating a cold

- If you get what is going around, it is a virus. Viruses are easily spread from person to person. Bacteria are not.
- If you have a cold, you DO have an infection ... viral not bacterial.
- Modern medicine has little to offer for the common cold and you usually do not need to see a doctor. Try to get out of the antibiotic habit for every little sniffle.
- Colds are always caused by viruses and will not be cured by an antibiotic.
- Yellow discharge is common with viruses and does not necessarily indicate a bacteria infection.
- A cold may last for up to two or three weeks ... treated or untreated.

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- For the first few days, you should get as much rest as your body wants. After this initial fatigue, you will get well faster if you stay moderately active.
- Take a decongestant during the day to relieve nasal stuffiness but it may keep you awake at night.
- Take a cough suppressant (dextromethorphan) for a frequent, dry, unproductive cough. If you are not coughing that much, don't take anything.
- Avoid OTC nasal decongestant sprays (Afrin, Neo-synephrine) if you can.
- Use OTC or homemade (one teaspoon of salt per quart of water) saltwater nasal sprays to thin the mucous and sooth your nose.
- Take ibuprofen or acetaminophen (Tylenol) for aches, pain and sore throat.
- If you have a sore throat, avoid hot drinks. Sip on cold liquids instead.
- You may have a little nose drainage or a little cough for weeks.
- See the doctor if you have fever, green discharge or a *double sickening*.
- Beware that you can become addicted to prescription cough medicines and don't expect the doctor to keep refilling them.
- Don't smoke during your illness. It only makes things worse.
- Avoid drinking alcohol. The *hot toddy* may numb to symptoms but it depresses your immune system and weakens your ability to get over the infection.
- Use tissues instead of handkerchiefs. They are more sanitary and less likely to spread infection.
- Drink plenty of liquids.
- Wash your hands often to prevent spread of the virus.
- If you have a sick or elderly person in the home, consider wearing a dust mask to prevent spread of the viruses.