Cold viruses grow mainly in the nose. They can get into your nose if an infected person coughs or sneezes near you, or if your contaminated fingers (from, say, touching a door knob) touch your nose or eyes. (The virus can travel down your tear ducts into your nose.)

Once the virus gets into the nose, most people will develop an infection.

“When we intentionally expose healthy people to cold viruses in nasal drops, about 85 to 90 percent of them will become infected,” says Ronald Turner.

That means that the virus starts to reproduce in the infected person’s nose. But it doesn’t mean that the person will get sick.

“Only a little more than half of the people exposed in this way experience cold symptoms,” notes Turner.

It turns out that married couples spread their colds to each other only 30 to 40 percent of the time.1 And sharing living quarters for 36 hours with someone who has a cold spreads the cold less than 10 percent of the time.2

Why doesn’t everybody who’s exposed to the cold virus get sick? Because cold symptoms aren’t caused directly by the virus, notes Turner, but by the response of the infected person’s immune system.

“Colds are sometimes called cytokine diseases,” says Sheldon Cohen of Carnegie-Mellon University in Pittsburgh. Cohen has spent 30 years studying who gets colds and who doesn’t. “Cytokines are protein molecules that the immune system produces when you’re infected by a cold virus.”

Cytokines travel to the site of the infection, where they direct the immune response to the virus. “These proinflammatory cytokines are the primary cause of the symptoms that you experience when you have a cold,” explains Cohen.

“What you would like to happen,” he adds, “is for your immune system to respond and release proinflammatory cytokines that will start the immune response and orchestrate it. But you don’t want to produce too many cytokines.”

Keep that in mind the next time you see a claim that some pill can “enhance your immune system.” That may be the last thing you want.

Some people seem to be genetically programmed to have a more robust inflammatory response, says Turner. “But that’s not the whole story, because such individuals may get a cold one time but not another when they’re exposed to the virus.”

Nor does your overall health make you less or more likely to get a cold. “A weak immune system has nothing to do with getting a cold,” Turner explains. “Perfectly healthy people can get colds if they’re exposed to cold viruses.”

Other less obvious factors can affect the odds, researchers have discovered.

■ Having an upbeat personality. “The most reliable finding in my research is that people who express more positive emotions all the time, who are upbeat, are much less likely to develop colds when we expose them to cold viruses,” says Cohen.

Who’s more likely to come down with a cold? Researchers are uncovering some tantalizing clues. Here’s the latest.

“The viruses that cause colds are around us all year long,” says Ronald Turner, an infectious-diseases expert at the University of Virginia Medical School. “But not everyone who encounters one of them gets sick.”

Cohen and his colleagues tracked 193 healthy people for two weeks, interviewing them by phone at night to ask if they felt lively, happy, cheerful, calm, at ease, sad, unhappy, tense, on edge, angry, or hostile that day.3

“We averaged their responses over the entire two weeks so that we measured a more stable emotional style rather than the ups and downs that occur in any day for most people,” explains Cohen.

Then the researchers quarantined the volunteers, gave them nasal drops containing either a cold or flu virus, and monitored them for symptoms over the next few days.

“The people who expressed more positive emotions overall were much less likely to become sick with a cold or the flu than those who expressed fewer positive emotions,” says Cohen.

“And when they did get sick, they reported milder symptoms.” An earlier study found the same pattern.4

■ Avoiding long-term stress. “People are as much as five times more likely to develop colds if they’re experiencing significant stress in their lives, such as unemployment, marital problems, or conflicts with friends,” says Cohen. The stress has to last a month or more before it has a significant impact, he adds. “Short-term stresses during a day don’t seem to matter.”

■ Sleeping well. “People who sleep more than seven hours a night or who are more sleep-efficient are much less likely to develop colds,” notes Cohen. (Sleep efficiency is the percentage of time in bed spent asleep.)
“We followed healthy volunteers for a couple of weeks to measure their typical sleep patterns, and then we brought them into the lab and gave them nasal drops that contained a cold virus. We tracked them for five or six days to see who developed a cold and who didn’t.”

People who averaged less than seven hours of sleep a night were three times more likely to develop a cold than those who averaged eight hours a night. And participants with a sleep efficiency of less than 92 percent were 5½ times more likely to catch colds than those with a sleep efficiency of 98 percent or more. (If you’re in bed for eight hours and have a 92 percent sleep efficiency, it means you spend 38 minutes trying to fall asleep or go back to sleep.)

Doing moderate exercise. When exercise and immunity expert David Nieman of Appalachian State University in Boone, North Carolina, and his colleagues analyzed data on the physical activity of 1,002 men and women, they found that the more the participants exercised during the fall and winter, the fewer sore throats, headaches, fevers, and other ailments they suffered.

Those who engaged in aerobic activities like brisk walking at least five times a week spent 43 percent fewer days with upper respiratory infections than those who exercised less than once a week. And when the exercisers did get sick, their illnesses were milder.

“It takes getting out most days of the week to see an actual benefit,” explains Nieman.

Two studies have assigned volunteers to exercise or not exercise and then recorded who caught colds or the flu.

In one, “sick days were reduced by half in women who walked briskly for 35 to 45 minutes a day five days a week for 15 weeks,” says Nieman.

In the other, 115 overweight or obese sedentary postmenopausal women were randomly assigned to about 40 minutes of moderate-intensity exercise, usually brisk walking, four days a week, or to once-a-week stretching exercises for one year.

From month nine through month 12, the walkers recorded one-third fewer colds than the stretchers.

Too much strenuous exercise can make people more susceptible to respiratory infections, though. People running a marathon, for example, are six times more likely to get sick in the days following a race than equally fit runners who didn’t run the race.

After 90 minutes of intense exertion, Nieman notes, stress hormones climb, muscle breaks down, and inflammation sets in.

Control symptoms like feverishness, headache, and not feeling well. They may also help control coughs.

Decongestants act quickly and powerfully to relieve nasal obstruction. But when the decongestant effect of the drug wears off, nasal obstruction rapidly returns. Nasal decongestants also burn and irritate the throat.

Cough suppressants are effective against chronic coughs in clinical trials, but there is little published information on how well they suppress coughs due to colds.

If your stuffy nose, facial pressure, and cough are no better—or are worse—after seven to ten days, consider contacting your physician to see if you need treatment for a bacterial infection.

What about chicken soup? Hot liquid is a demulcent, explains Cardiff’s Common Cold Centre, which means it forms a soothing film over mucous membranes. So any hot drink or soup—especially one with a slightly bitter flavor (from lemon, lime, or citric acid, for example)—will help relieve sore throat or cough symptoms. And spicy foods and spicy hot soups promote airway secretions that have a calming action on an inflamed throat.

Source: www.commoncold.org and cardiff.ac.uk/biosi/subsites/cold/medication.html.
In from the Cold

Last December, in settling a complaint by the Federal Trade Commission, Dannon agreed to stop its “false and misleading” ads implying that people who drink DanActive probiotic beverage are less likely to catch a cold or the flu. (Never mind that a product that enhanced your immune system could make cold symptoms worse.)

But that probably won’t make a dent in the millions of dollars consumers will shell out this year on cold and flu remedies. Are they wasting their money? Here’s the evidence behind some popular products.

**Cold-Eeze**

**Claim:** “Clinically proven to shorten colds by nearly one-half.”

**What’s in it:** 13.3 milligrams of zinc gluconate per lozenge.

**Cost:** $2.40 a day for the maximum dose.

**The facts:** Can Cold-Eeze really shorten the duration of colds? (The manufacturer can make that bold claim because Cold-Eeze is a “homeopathic” medicine—see “Wherefore Art Thou Homeo?”)

“In our studies, we saw about a one-day reduction in the duration of colds, but no change in the severity, when we induced colds in volunteers with nasal drops,” says the University of Virginia’s Ronald Turner. “But we didn’t see any effect in volunteers who caught colds on their own.”

**Bottom line:** In some studies, zinc gluconate lozenges shorten—by a day or two—the duration of colds. In other studies, they don’t.

**Echinacea**

**Claim:** “Can be recommended as part of a regimen for Winter Wellness,” says NatureMade.

**What’s in it:** Purple coneflowers.

**Cost:** 30 to 40 cents a day.

**The facts:** Since 2000, U.S. and Canadian researchers have published nine studies that tested the purpurea strain of Echinacea against colds.

Three of the studies looked at whether taking Echinacea every day could prevent colds. It didn’t. The other six looked at whether taking Echinacea every day at the first hint of a cold could lessen its symptoms or shorten its duration. In four of them, Echinacea was no more helpful than a placebo. In the other two, Echinacea takers reported slightly milder symptoms than placebo takers.

“There are so many different products available that are not standardized,” says cold expert Ronald Turner. “It’s impossible for consumers to figure out which of them might possibly have a small benefit.”

**Bottom line:** Echinacea doesn’t prevent colds. In most studies, it also doesn’t lessen cold symptoms.

**EpiCor**

**Claim:** “Clinically shown to help activate and guard your immune function.”

**What’s in it:** Fermented brewers yeast.

**Cost:** $20 a month.

**The facts:** Two studies have given EpiCor or a placebo to a total of 232 people for three months and waited to see who got sick.

In the more recent one, the EpiCor takers had 13 cases of cold or flu for every 15 cases in the placebo takers, but their illnesses were just as nasty and lasted just as long. In the other study, for every seven colds in the EpiCor group, there were eight colds in the placebo group. And the EpiCor takers were sick for an average of one day less.

**Bottom line:** If larger trials confirm these modest results, taking EpiCor every day could mean one less cold roughly every three years.


**Airborne**

**Claim:** “Helps support your immune system.”

**What’s in it:** Nine vitamins and minerals, a trivial amount of two amino acids, and a blend of herbs.

**Cost:** $2.25 a day.

**The facts:** “There is no credible evidence that Airborne products, taken as directed, will reduce the severity or duration of colds, or provide any tangible benefit for people who are exposed to germs in crowded places.” That’s what the Federal Trade Commission charged in 2008 in announcing that Airborne’s manufacturer had agreed to stop making those claims and to provide up to $30 million in refunds to consumers who believed they were deceived by the company’s ads.

Airborne now contends that it can “help support your immune system.” There’s no credible evidence for that assertion either, but since it’s classified as a “structure or function” claim, the company needs no evidence. Pretty slick.

**Bottom line:** Despite hundreds of millions of dollars in sales, there is no evidence that Airborne works.
Photos: Jorge Bach.

generally trust OTC claims, you can only claim to relieve symptoms. —
shorten colds or the flu, OTC remedies can claim to help you cope with colds and the flu. But each represents a different class of remedy, and the Food and Drug Administration regulates each in a very different way. That affects how much you can trust the products’ claims.

DayQuil is an over-the-counter (OTC) medication. OTC manufacturers have to convince the FDA that any claims they make are supported by solid scientific evidence before their products hit the market. Since no OTC drug has been proven to prevent or shorten colds or the flu, OTC remedies can only claim to relieve symptoms. —You can generally trust OTC claims.

Sambucol is a dietary supplement. (The FDA requires dietary supplements to say so on the label.) Dietary supplements can’t make claims about relieving colds or the flu without prior FDA approval, but they can make vague “structure or function” claims, like “helps support the immune system,” without having to prove that they’re true...or that they make any difference. —Be skeptical of dietary supplement claims.

Cold-Eeze is a homeopathic medicine. (The FDA requires homeopathic medicines to say so on the label.) Homeopathic remedies can claim to prevent or cure colds and the flu without having to show any proof to the FDA. Why? Traditional homeopathic drugs aren’t considered a safety hazard because they’re diluted repeatedly until there’s nothing left of their active ingredients. And in the past, few people used them. So, in 1938, Congress exempted them from strict regulation.

But that no longer makes sense. Homeopathy has become a huge industry that sells its products by the millions to shoppers everywhere from Walmart to supermarkets to the Internet. And many (Cold-Eeze, for example) contain substantial amounts of active ingredients.

“I seriously doubt if one-twentieth of the so-called homeopathic products sold in stores today have any basis in homeopathic principles,” says Southern Illinois University’s John Haller, an authority on the history of homeopathy. “That’s homeopathy’s dirty little secret.” —Be skeptical of homeopathic medicine claims.

Wherefore Art Thou Homeo?

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Cost: About $1.50 a month for 1,000 IU a day.

The facts: Vitamin D increases the production of antimicrobial peptides (small protein-like natural antibiotics) in the body’s cells. And in two U.S. studies, people with higher vitamin D levels in their blood had a lower risk of upper respiratory infections. Does that mean that taking vitamin D can stop the flu (or a cold)?

Japanese researchers gave 334 children either 1,200 IU of vitamin D or a placebo every day from December through March. The vitamin D takers had six cases of the flu for every ten cases in the placebo takers.1 But three trials in adults—using 400 IU a day for six months, 800 IU a day for 11 to 25 months, or 2,000 IU a day for three months—all came up empty.2,4 In none of the studies did those taking vitamin D have fewer cases of the flu or other respiratory infections than similar people who were given a placebo.

Bottom line: The evidence that vitamin D can prevent colds or the flu is meager.


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