

## Exercise and the Common Cold

A cold is an inflammation of the upper respiratory tract caused by a viral infection. The common cold is probably the most frequently occurring illness in humans worldwide. More than 200 different viruses cause colds, and rhinoviruses and coronaviruses are the culprits 25-60 percent of the time. Rhinovirus infections often occur during the fall and spring seasons, while the coronavirus is more common during the winter.

The U.S. Centers for Disease Control and prevention estimates that over 425 million colds and flus occur annually in the United States, resulting in \$2.5 billion in lost school and work days, and in medical costs. The average person has two or three respiratory infections per year. Young children suffer from six to seven annually.

### How does one catch a cold?

Although still a matter of controversy, growing evidence suggests that at least among adults, cold viruses are passed from person to person primarily by being inhaled into the nose and air passageways (*i.e.*, spread through the air). Viruses can be spread by direct contact with wet nasal discharge, but this may be rare, except perhaps in settings such as day care centers. Severe colds transmit viruses more readily than mild ones because a greater amount of virus is passed into the air by coughing and sneezing. Thus, to hinder the spread of cold viruses, coughs, sneezes and "nose-blows" should be smothered with clean handkerchiefs or facial tissues. It is also a very good idea to wash viruses off the hands with soap and water, and to disinfect one's surroundings.

Damp, cold or drafty weather does *not* increase the risk of getting a cold. According to most cold researchers, cold or bad weather simply brings people together indoors, which leads to more person-to-person contact.

### Cold Treatment

Doctors often quip that a cold lasts seven days without treatment, and one week with it. Most nonprescription medications, including antihistamines, decongestants, cough medicines, and analgesics provide only temporary relief of symptoms. These medications can make one feel more comfortable while the body's immune system gears up to fight off the infection. To get rid of the cold, the immune system must make enough antibodies to destroy the viruses, a process that takes three to four days. Antibiotics that fight bacteria have no value in the treatment of the uncomplicated common cold which is caused by a virus.

Even the old standby - inhaling steam -- has little or no beneficial effect on cold symptoms. Vitamin C does not prevent colds, according to most researchers, but may slightly reduce the severity and duration of symptoms. Resting, drinking plenty of hot fluids, and seeking comfort from over-the-counter cold remedies is still all that can be done to treat most colds.

### Keeping the immune system in good shape

Whether one gets sick with a cold after a sufficient amount of the virus has entered the body depends on many factors that affect the immune system. Aging, cigarette smoking, mental stress, poor nutrition, and lack of sleep have all been associated with impaired immune function and increased risk of infection.

Based on current knowledge, good immune function can be maintained by eating a well-balanced diet, keeping life stresses to a minimum, avoiding chronic fatigue, and obtaining adequate sleep. Immune function is suppressed during periods of very low caloric intake and quick weight reduction, so weight loss should be gradual to maintain good immunity.



**Can a walk each day keep colds away?**

People who exercise report fewer colds than their inactive peers. For example, one recent survey revealed that 61% of 700 recreational runners reported fewer colds since beginning to run, while only 4 percent felt they experienced more. In another survey of 170 experienced runners who had been training for 12 years, 90% reported that they definitely or mostly agreed with the statement that they "rarely get sick."

To test this belief scientifically, two well-controlled studies with young and elderly women were conducted. In both studies, women in the exercise groups walked briskly 35-45 minutes, five days a week, for 12-15 weeks, with the control groups remained physically inactive. The results were in the same direction reported by fitness enthusiasts -- walkers experienced about half the days with cold symptoms as the sedentary controls.

Other research has shown that during moderate exercise, several positive changes occur in the immune system. Although the immune system returns to pre-exercise levels very quickly after the exercise session is over, each session represents a boost that appears to reduce the risk of infection over the long term.

**Can too much exercise hurt?**

Among elite athletes and their coaches, a common perception is that heavy exertion reduces resistance to colds. During the Winter and Summer Olympic Games, clinicians report that "upper respiratory infections abound" and that "the most irksome troubles with athletes are infections."

To determine whether these anecdotal reports were true, 2,311 marathon runners who ran the 1987 Los Angeles Marathon were studied. During the week following the race, one out of seven runners became sick, which was about five times the rate of runners who trained for, but did not run, the Marathon. During the two-month period before the race, runners training more than 60 miles a week doubled their odds for sickness compared to those training less than 20 miles a week. Researchers in South Africa have also confirmed that after marathon-type exertion, runners are at a high risk for sickness.

The immune systems of marathon runners have been studied under laboratory conditions before and after running 2-3 hours. A steep drop in immune function occurs lasting at least 6-9 hours. Several exercise immunologists believe this allows viruses to spread and gain a foothold.

**Rest or exercise when sick?**

Most clinical authorities in the area of immunology recommend:

- If one has common cold symptoms (e.g., runny nose and sore throat without fever or general body aches and pains), intensive exercise training may be safely resumed a few days after the resolution of symptoms.
- Mild-to-moderate exercise (e.g., walking) when sick with the common cold does not appear to be harmful. In two studies using nasal sprays of a rhinovirus leading to common cold symptoms, subjects were able to engage in exercise during the course of the illness without any negative effects on severity of symptoms or performance capability.
- With a symptom complex of fever, extreme tiredness, muscle aches, and swollen lymph glands, 2-4 weeks should probably be allowed before resumption of intensive training.
- In general, if the symptoms are from the neck up, moderate exercise is probably acceptable and, some researchers would even argue, beneficial, while bed rest and a gradual progression to normal training are recommended when the illness is systemic. If in doubt as to the type of infectious illness, individuals should consult a physician.



## **Practical applications**

Although more research is needed, the American College of Sports Medicine (ACSM) supports the viewpoint that moderate physical activity (30 minutes a day, on most, if not all days of the week) exerts less stress on the immune system than does prolonged and intense exercise. Regular and moderate exercise lowers the risk for respiratory infections, a finding consistent with previous reports from ACSM urging people to exercise moderately for enhancement of health and disease prevention. Athletes who must train hard for competition can lower their risk of respiratory infection by following the guidelines listed in this report for keeping the immune system in good shape.

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Current Comments are official statements by the American College of Sports Medicine concerning topics of interest to the public at large.

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