

“What you need to know to beat Colds & Flu”

By Simone Gloger, RNC, RHC, Director of Nutrition
& Jerry Hickey, R.Ph., Scientific Director/ InVite Health
Edited by Lisa Flax, MS, Director of Nutrition/ InVite Health; New Hyde Park

The Common Cold and Flu

We have all experienced the sore throat, runny nose, muscle aches, and general sense of misery associated with the onset of the common cold. Other familiar symptoms include coughing, headache, and dry, sore, or sensitive breathing passages. The common cold (the most prevalent of all human diseases) is a mild viral infection of the upper respiratory tract. A cold typically lasts about five days, but you can have a residual cough that lasts several weeks. Although most people succumb to colds in the fall and winter, cold weather is not the cause; weather does, however, play an indirect role. For example, most viruses that cause colds survive better when humidity is low. This happens most often in the fall and winter, when weather promotes dryness of the nasal membranes, making them more vulnerable to infection. In addition, people tend to spend more time socializing indoors when the weather is cold, thus increasing the chance of exposure. A cold is spread by droplets from a sneeze or cough, something you are more likely to encounter in a closed room. There are over 200 viruses that can cause the common cold, but the most common are the rhinoviruses.⁽⁷⁾

Influenza, commonly known as the flu, is a more severe infection than a cold. The flu reaches peak prevalence in the winter and it is most commonly spread by droplet infection during a coughing attack. The most common symptoms of a flu infection are fever, sore throat, muscle pain, severe headache, coughing, and general weakness and fatigue. According to the Merck Manual of Diagnosis and Therapy, symptoms can start 24 to 48 hours after infection, and their onset may be sudden. It takes one to two weeks to recover from the flu. Influenza can result in death for people with poor immune function. According to a January 7, 2003 press release by the Center for Disease Control (CDC), each year 36,000 people die in the United States from flu-related complications.

Viruses are the cause of cold and flu infections. However, when everyone in the workplace and at home seems to have a cold, how is it that some people escape infection? Some doctors are exposed to colds all day long and don't get sick. Some people can resist viral

attacks, while the immune system of others is weakened and run down to such a degree, they become susceptible to viral assault. For example, if three healthy people were to breathe the same germs at the same moment, one may develop pneumonia, another may suffer a cold, and the third may go unscathed.⁽¹⁾ This suggests an ebb and flow in immune function for each individual, which is affected by stress, diet, amount of rest, and other factors.

Poor Diet

Proper attention to your diet can help you prevent the nutrient deficiencies, imbalances, and toxin loads in the body that lead to illness of all sorts, from the common cold to severe flu complications. Avoid foods that decrease immune function, especially simple sugars, which have

been shown to reduce the function of white blood cells. These primarily consist of refined sweeteners, cane sugar, corn syrup, and beet sugar. Also included are natural sugar sources, such as honey, alcohol, and concentrated fruit sugar found in dried fruit and fruit juice.⁽¹⁾



Other foods that should be minimized include those that are difficult to digest, contain high levels of toxins, or fall under the category “junk food.” Generally, meats and animal products are harder for the body to digest, and contain toxins such as bacteria, hormones, pesticides, and antibiotics that tax the immune system. If you do eat meat, try to buy organic, free-range products. Food additives, such as synthetic

colors, sweeteners, flavorings, and preservatives increase the toxic load of the body and stress the mucus membranes and the immune system. Hydrogenated oils, such as those found in margarine, chips, and many other snack foods, can also overload the immune system.

Finally, overeating and unwise food combinations can also lead to an accumulation of toxins in the body. The most common and damaging food combination is the consumption of foods high in protein (such as meats, eggs, and milk) with fruit, sugars, and other sweet foods. Please feel free to visit with one of our nutritionists to learn more about healthier food combinations.



Stress

Stress is a strong influence with regard to increased susceptibility to infection. During times of stress, hormones are released in the body that inhibit the thymus gland, reducing immune activity.⁽²⁾ The more stress one endures, the greater the chance of viral infection. This effect was demonstrated in a study that evaluated 420 people for stressful occurrences during the previous year. Job loss, divorce, death, and relocation were among the events included. Fear, sadness, anger, and nervousness were among the emotions monitored. The subjects were then exposed to one of five cold viruses and tested for antibodies one month later. Of those under the greatest amount of stress, 90% became infected, compared to 74% of those under the least stress. Another study of 100 people showed that those who experienced particularly high degrees of anger and tension were four times more likely to develop a cold or bacterial infection than those who did not experience such emotions.^(1,2)

Stress from insufficient rest can also increase susceptibility to colds and flu. When the body is deprived of sleep, natural killer cells that are important in fighting viruses will be less effective.^(2,3)

Natural Prevention of Colds and Flu

First and foremost when it comes to cold and flu prevention is strengthening of the immune system. By doing this, you enable the body to mobilize its first line of defense. An individual with a healthy immune system has a greater chance of fending off bacteria, germs, and the viruses that cause respiratory tract infections. Even if you contract a virus when your immune system is functioning optimally, the duration of the illness will be shortened, and the symptoms less severe. Also, the chance of complications, such as pneumonia, will be decreased.

- Wash your hands frequently with hot water and soap, especially when you are in public areas or in proximity to someone who is ill.
- Avoid touching your eyes, nose or mouth. Germs are often spread when a person's hand comes into contact with one of

those areas after touching a contaminated surface.

- Avoid close contact with people who have a cold until the fifth day of their illness, at which time they should be less infectious.⁽⁴⁾
- Check with a doctor concerning the infectivity of the current flu strain.
- Use a humidifier to moisten the air. This will help protect mucous membranes from dryness which renders them more vulnerable to infections.
- Avoid tobacco smoke; Smokers catch more colds, which last longer compared to non-smokers. Children whose caregivers smoke are also more susceptible to colds.

Taking Action Against Colds and Flu

Many nutritional supplements can be valuable aids when dealing with a cold or flu infection, due to their ability to stimulate immune function and protect the body from the ravages of stress. Instead of waiting until your symptoms become unbearable and using an over-the-counter medication, action should be taken when the viral count is low and symptoms are mild.

Vitamins and Minerals

Beta-carotene and vitamins C and E are well known for their immune-enhancing functions. Vitamin D and the minerals zinc and selenium also play a pivotal role in immune health.

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Vitamin C has well-established antiviral and antibacterial properties, and it also acts as an immunostimulant. It increases intracellular stores of the antioxidant glutathione, healthy levels of which are needed for proper immune function. Vitamin C enhances white blood cell production, increases interferon (a group of proteins released by white blood cells to combat a virus), improves antibody response, and promotes secretion of thymus hormones.⁽⁶⁾ A number of studies have reported that people taking large doses of vitamin C experienced

reductions in the incidence, severity, and duration of colds.

Vitamin E interacts synergistically with vitamin C and the mineral selenium, increasing resistance to infection. They also protect us against the damaging effects of stress and pollutants, both of which are inflammatory agents that take a toll on immune function.^(5,10) Beta-Carotene is a safe and non-toxic precursor to vitamin A. It helps heal inflamed mucous membranes and strengthen the immune system. A deficiency in this vitamin will render you more prone to infections, especially colds and flu.

Zinc is truly the most important mineral with regard to immune function. It increases the size of the thymus gland, which is considered to be the conductor of the immune orchestra. Without a healthy thymus gland the immune system is powerless. Zinc has been studied for its antibacterial and antiviral properties, and can help alleviate colds and sore throats as well.

Vitamin D is emerging as a nutritional superstar for its role in decreasing the risk of a wide array of cancers, promoting bone health, decreasing the risk of diabetes, preventing severe periodontal disease, alleviating the winter blues, and improving leg strength in elderly women. The active form of Vitamin D (cholecalciferol, a/k/a D₃) has profound effects on human immunity. It minimizes inflammation while increasing the ability of immune cells to destroy viruses and bacteria. In fact, recent research shows that Vitamin D increases the concentration of bacteria-killing and virus-killing peptides (very small proteins) that exist in our immune cells. Vitamin D deficiency is more common in the winter. When vitamin D status is poor, it is much easier to develop a respiratory tract infection. ⁽¹⁴⁾

Powerhouse Immune Promoters

Each of the body's trillion-plus cells contains six billion nucleotides. Nucleotides are tiny building blocks of ribonucleic acid (RNA) and deoxyribonucleic acid (DNA). RNA and DNA serve as the blueprints for every cell in the body. Nucleotides provide the raw material to dramatically increase white blood cell production. The immune system can then deploy its army of white blood cells to readily take down any invaders. Research shows that nucleotides can significantly diminish the symptoms and duration of the common cold. In research trials, nearly all patients on a therapeutic course of nucleotides reported significantly less discomfort associated with cold symptoms, and a substantially accelerated recovery. These symptoms included sinus pain, earache, headache, diminished taste, high body temperature, dry mouth, swollen glands, and muscle aches. ⁽⁹⁾ Research also shows that nucleotides balance immune function, by increasing the ability to fight infection, while simultaneously improving control; an important factor in the prevention of allergies and inflammation. ⁽¹⁵⁾

Olive Leaf contains a biologically active compound called oleuropein, which has strong antibacterial and antiviral properties. Specifically, it disrupts the growth of bacteria and viruses and also stimulates the activity of important cells. Olive leaf extract has been shown to be effective against virtually all of the viruses and bacteria on which it has been tested. Laboratory studies suggest that olive leaf extract interferes with the establishment and spread of viral infection, either by rendering viruses incapable of infecting cells or by preventing them from reproducing. It is useful for pneumonia, sore throat, sinusitis and bacterial infections. Oleuropein is so powerful it's been known to ameliorate a dangerous infection caused by an antibiotic-

resistant strain of bacteria known as *pseudomonas aeruginosa*. It also improved the survival time of laboratory animals with sepsis, an overwhelming infection of the blood and body organs caused by this dangerous bacterium. ⁽¹⁶⁾

Astragalus enhances immune function by increasing the activity of certain white blood cells which, in turn, leads to greater production of antibodies (IgA and IgG). It also increases the production of interferon, an anti-viral and anti-tumor agent naturally produced by the body. In addition to enhancing immunity, astragalus has antibacterial, adaptogenic, anti-inflammatory and antiviral effects. It owes most of its immune-enhancing effects to polysaccharides, a group of complex sugars responsible for initiating the immune response. ⁽¹²⁾

White tea has incredibly powerful antioxidant, antibacterial, and anti-fungal benefits. It has been prized in Asia for its longevity-enhancing properties for over 1,000 years. Made from the bud of the tea plant rather than the leaves, studies have shown it contains potent polyphenol antioxidants. These white tea polyphenols fight cancer-causing substances. They also have a direct inhibitory effect on a cross section of viruses, yeast and bacteria, including staphylococci, streptococci, and pneumonia-related organisms. According to Milton Schiffenbauer, Ph.D., a microbiologist in the Pace University Department of Biology, "Our research shows white tea extract can actually destroy, in vitro, the organisms that cause disease. Study after study with tea extract proves that it has many healing properties. This is not an old wives tale, it's a fact." ⁽¹⁷⁾

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Resveratrol is an antioxidant and it also exhibits anti-fungal and antiviral effects. It is usually found in the skin of red grapes and as a constituent of red wine, but it is also found in raspberries, blueberries, peanuts, and some pine trees. ^(11, 13) Resveratrol has been proposed as a useful agent for fighting an impending bird flu epidemic by the H₅N₁ strain. H₅N₁ causes

severe pulmonary (lungs) and systemic inflammation that strongly contributes to morbidity and mortality. Resveratrol, as well as perna canaliculus and fish oil, help alleviate inflammation in the lungs and throughout the body, making these nutrients a useful strategy for decreasing mortality. ⁽¹⁸⁾

N-acetyl-L-cysteine (NAC) is a stable form of the amino acid cysteine. It is used by the body to make glutathione, a very important antioxidant. NAC has been used for many years to treat chronic respiratory ailments, as it has the ability to clear congested lungs. Studies have shown that people with illnesses which are associated with a breakdown in the immune system are often deficient in glutathione. Therefore, NAC supplements are useful in reducing the likelihood of flu and cold symptoms. Taking NAC throughout flu and cold season has been shown to decrease the risk of contracting the flu in both college-aged and elderly subjects. ⁽¹⁹⁾

Maitake Mushroom (*grifolafrondosa*) is considered an adaptogen, which means that it normalizes bodily functions and helps the body adapt to stress. Its healing properties are thought to be related to its high content of a polysaccharide called beta-1, 6-glucan, which is considered a very powerful nutrient. Maitake mushroom increases energy, keeps the immune system healthy, and increases longevity. ⁽¹²⁾ Shiitake mushrooms (*lentinus edodes*) contain a polysaccharide called lentinan that strengthens the immune system by activating or modulating T-cell function. ⁽¹²⁾ Reishi mushrooms (*ganoderma lucidum*) have been popular for at least 2,000 years in the Far East. They exhibit antibacterial and antiviral properties and work as an anti-inflammatory for bronchitis and other respiratory problems (allergies, colds, etc.). Like many medicinal mushrooms, reishi mushrooms enhance the immune system via their ability to activate NK cells, macrophages, T-lymphocytes, and cytokines ⁽¹²⁾.

Symptom Relief

Perilla frutescens is an Asian plant belonging to the mint family. It has traditionally been prescribed by Asian herbalists for the relief of cough and lung ailments, and for preventing the flu. ⁽²⁰⁾ Perilla addresses the type of inflammation seen in the respiratory tract during infection.

Perna canaliculus, also known as green-lipped mussel, is indicated for preventing the devastating inflammation sometimes seen in the lungs and respiratory tract of patients with the flu. In this way perna is a good candidate for helping to decrease flu mortality. ⁽¹⁸⁾

Stinging nettle (an herbal extract) and quercetin (a non-citrus bioflavonoid) are excellent aids for reducing inflammation and symptoms. Stinging Nettle has been used since ancient times for reducing congestion, controlling coughs, and improving lung function. Research also indicates that nettles may reduce hay fever symptoms, including sneezing and itching. ⁽²¹⁾ Quercetin may help inactivate the bird flu virus and inhibit the release of symptom-causing inflammatory chemicals, while protecting the lungs and other organs from the damage associated with bird flu. ^(22, 23)

Before buying into the current hype and fear over viral epidemics, we urge you to work with a natural health care provider to create an immune-strengthening diet and supplement program personalized just for you. By doing so, most people should be able to enjoy winter, or any season for that matter, without the annoyance and misery of having a cold, flu or respiratory tract infection.

Footnotes

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