

TerranearPMC Safety Share

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Week of January 22, 2018 – The Common Cold

It looks like we are in the midst of the Cold Season. Many people have developed some serious conditions such as high fever, congestion, and severe coughing. In many cases, people are not sure if they contracted a flu or just a bad cold. In an earlier *SafetyShare* I discussed the flu, including its first recorded pandemic (during the end of World War I) as well as some medical investigative work, treatments and preventative measures. But the common cold is not the same thing as the flu; although there are similarities.

The **common cold**, also known simply as a **cold**, is a viral infectious disease of the upper respiratory tract. Oh yes, it appears that the common cold is caused by a virus. Other systems that are primarily targets are the throat, sinuses, and larynx. Signs and symptoms may appear less than two days after exposure to the virus. These may include coughing, sore throat, runny nose, sneezing, headache, and fever. These symptoms are similar to the flu – with the exception that one of the main symptoms of the flu are muscle and body aches; and the flu has been linked to much more dire health consequences (i.e. death). People with colds usually recover in seven to ten days, but some symptoms may last up to three weeks. Occasionally those with other health problems may develop pneumonia.

The common cold is the most frequent infectious disease for humans. The average adult gets two to four colds a year, while the average child may get six to eight. Infections occur more commonly during the winter and have existed throughout human history.

In adults, a fever is generally not present but it is common in infants and young children. The cough is usually mild compared to that accompanying influenza. While a cough and a fever indicate a higher likelihood of influenza in adults, a great deal of similarity exists between these two conditions. A number of the viruses that cause the common cold may also result in asymptomatic infections; meaning a person is a carrier of an infection but does not experience any of the associated symptoms.

Well over 200 virus strains are implicated in causing the common cold, with the majority caused by rhinoviruses - the most common viral infectious agent in humans. They spread through the air during close contact with infected people or indirectly through contact with objects in the environment, followed by transfer to the mouth or nose. While the color of the sputum or nasal secretion may vary from clear to yellow to green, these characteristics do not indicate the class of agent causing the infection.

As it turns out, rhinoviruses proliferates at temperatures between 91 – 95 °F, which is the typical temperature range in the nasal region. The symptoms are mostly due to the body's immune response to the infection rather than to tissue destruction by the viruses themselves. In contrast, those affected by influenza can show similar symptoms as people with a cold, but symptoms are usually more severe. Additionally, the influenza is typically less likely to affect the nose.



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Rhinovirus-caused colds are most infectious during the first three days of the manifestation of symptoms; they are much less infectious afterwards. Unlike viruses, there is no vaccine for the common cold. The primary methods of prevention are: hand washing; not touching the eyes, nose or mouth with unwashed hands; and staying away from sick people. And that includes limiting time in crowded locations, including daycare centers, break areas (at work) and even sports events and air travel. Some evidence supports the use of face masks, although most healthcare professionals do not recommend this. While there is no cure for the common cold, symptoms can be treated. Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen may help with pain. Antibiotics, however, should NOT be used; and there is no evidence that supports the use of cough medicines.

A cold usually begins with fatigue, a feeling of being chilled, sneezing, and a headache, followed in a couple of days by a runny nose and cough. Symptoms may begin within sixteen hours of exposure and typically peak two to four days after onset. They usually resolve in seven to ten days, but some can last for up to three weeks. The average duration of cough is eighteen days and in some cases people develop a post-viral cough which can linger after the infection is gone. In children, the cough lasts for more than ten days in 35–40% of cases and continues for more than 25 days in 10%.

As mentioned earlier, the common cold virus is typically transmitted via inhalation. In many cases, airborne droplets/aerosols (due to sneezing and coughing), direct contact with infected nasal secretions, or fomites (contaminated objects). While airborne/inhalation is an obvious route to contract a cold, recent studies have been focusing on hand-to-hand and hand-to-surface-to-hand contact. Thus many of us are using anti-bacterial wipes when we will be in contact with shopping carts and even door knobs. This mode of transmission seems to be of greater importance than transmission via aerosols. The fact is many viruses can survive for prolonged periods in the environment (over 18 hours for rhinoviruses) and can be picked up by people's hands and subsequently carried to their eyes or nose where infection occurs. Transmission is common in daycare and at school due to the proximity of many children with little immunity and frequently poor hygiene. These infections are then brought home to other members of the family. There is no evidence that recirculated air during commercial flight is a method of transmission. People sitting in close proximity appear to be at greater risk of infection.

The traditional theory is that a cold can be "caught" by prolonged exposure to cold weather such as rain or winter conditions, which is how the disease got its name. Some of the viruses that cause the common colds are seasonal, occurring more frequently during cold or wet weather. The reason for the seasonality has not been conclusively determined. Possible explanations may include cold temperature-induced changes in the respiratory system, decreased immune response, and low humidity causing an increase in viral transmission rates, perhaps due to dry air allowing small viral droplets to disperse farther and stay in the air longer.

The apparent seasonality may also be due to social factors, such as people spending more time indoors, near infected people, and specifically children at school. There is some controversy over the role of low body temperature as a risk factor for the common cold; the majority of the evidence suggests that it may result in greater susceptibility to infection.

The older the fiddle, the sweeter the tune – Irish Proverb

