

= Common cold =

Common cold , also known simply as a cold , is a viral infectious disease of the upper respiratory tract that primarily affects the nose . The throat , sinuses , and voice box may also be affected . Signs and symptoms may begin less than two days following exposure . They include coughing , sore throat , runny nose , sneezing , headache , and fever . People usually recover in seven to ten days . Some symptoms may last up to three weeks . In those with other health problems , pneumonia may occasionally develop .

Well over 200 virus strains are implicated in the cause of the common cold ; the rhinoviruses are the most common . They spread through the air during close contact with infected people and indirectly through contact with objects in the environment followed by transfer to the mouth or nose . Risk factors include going to daycare , not sleeping well , and psychological stress . Symptoms are mostly due to the body 's immune response to the infection rather than to tissue destruction by the viruses themselves . People with influenza often show similar symptoms as people with a cold , though symptoms are usually more severe in the former .

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 other sick people . Some evidence supports the use of face masks . No cure for the common cold exists , but the symptoms can be treated . Nonsteroidal anti -inflammatory drugs ( NSAIDs ) such as ibuprofen may help with pain . Antibiotics should not be used . Evidence does not support a benefit from cough medicines .

The common cold is the most frequent infectious disease in humans . The average adult gets two to four colds a year , while the average child may get six to eight . They occur more commonly during the winter . These infections have been with humanity since ancient times .

= = Signs and symptoms = =

The typical symptoms of a cold include a cough , a runny nose , nasal congestion and a sore throat , sometimes accompanied by muscle ache , fatigue , headache , and loss of appetite . A sore throat is present in about 40 % of the cases and a cough in about 50 % , while muscle ache occurs in about half . 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 .

The color of the sputum or nasal secretion may vary from clear to yellow to green and does not indicate the class of agent causing the infection .

= = = Progression = = =

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 the cases and continues for more than 25 days in 10 % .

= = Cause = =

= = = Viruses = = =

The common cold is a viral infection of the upper respiratory tract . The most commonly implicated virus is a rhinovirus ( 30 % ? 80 % ) , a type of picornavirus with 99 known serotypes . Other commonly implicated viruses include human coronavirus ( ? 15 % ) , influenza viruses ( 10 % ? 15 % ) , adenoviruses ( 5 % ) , human respiratory syncytial virus , enteroviruses other than rhinoviruses , human parainfluenza viruses , and metapneumovirus . Frequently more than one virus is present . In total over 200 different viral types are associated with colds .

#### == Transmission ==

The common cold virus is typically transmitted via airborne droplets ( aerosols ) , direct contact with infected nasal secretions , or fomites ( contaminated objects ) . Which of these routes is of primary importance has not been determined ; however , hand @-@ to @-@ hand and hand @-@ to @-@ surface @-@ to @-@ hand contact seems of more importance than transmission via aerosols . The viruses may 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 .

Rhinovirus @-@ caused colds are most infectious during the first three days of symptoms ; they are much less infectious afterwards .

#### == Weather ==

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 .

#### == Other ==

Herd immunity , generated from previous exposure to cold viruses , plays an important role in limiting viral spread , as seen with younger populations that have greater rates of respiratory infections . Poor immune function is a risk factor for disease . Insufficient sleep and malnutrition have been associated with a greater risk of developing infection following rhinovirus exposure ; this is believed to be due to their effects on immune function . Breast feeding decreases the risk of acute otitis media and lower respiratory tract infections among other diseases , and it is recommended that breast feeding be continued when an infant has a cold . In the developed world breast feeding may not be protective against the common cold in and of itself .

#### == Pathophysiology ==

The symptoms of the common cold are believed to be primarily related to the immune response to the virus . The mechanism of this immune response is virus specific . For example , the rhinovirus is typically acquired by direct contact ; it binds to human ICAM @-@ 1 receptors through unknown mechanisms to trigger the release of inflammatory mediators . These inflammatory mediators then

produce the symptoms . It does not generally cause damage to the nasal epithelium . The respiratory syncytial virus ( RSV ) , on the other hand , is contracted by direct contact and airborne droplets . It then replicates in the nose and throat before frequently spreading to the lower respiratory tract . RSV does cause epithelium damage . Human parainfluenza virus typically results in inflammation of the nose , throat , and bronchi . In young children when it affects the trachea it may produce the symptoms of croup due to the small size of their airways .

= = Diagnosis = =

The distinction between viral upper respiratory tract infections is loosely based on the location of symptoms with the common cold affecting primarily the nose , pharyngitis the throat , and bronchitis the lungs . However , there can be significant overlap and multiple areas can be affected . The common cold is frequently defined as nasal inflammation with varying amount of throat inflammation . Self @-@ diagnosis is frequent . Isolation of the viral agent involved is rarely performed , and it is generally not possible to identify the virus type through symptoms .

= = Prevention = =

The only useful ways to reduce the spread of cold viruses are physical measures such as hand washing and face masks ; in the healthcare environment , gowns and disposable gloves are also used . Isolation or quarantine is not used as the disease is so widespread and symptoms are non @-@ specific . Vaccination has proved difficult as there are many viruses involved and they mutate rapidly . Creation of a broadly effective vaccine is , thus , highly improbable .

Regular hand washing appears to be effective in reducing the transmission of cold viruses , especially among children . Whether the addition of antivirals or antibacterials to normal hand washing provides greater benefit is unknown . Wearing face masks when around people who are infected may be beneficial ; however , there is insufficient evidence for maintaining a greater social distance .

Zinc supplements may help to reduce the prevalence of colds . Routine vitamin C supplements do not reduce the risk or severity of the common cold , though they may reduce its duration . Gargling with water was found useful in one small trial .

= = Management = =

No medications or herbal remedies have been conclusively demonstrated to shorten the duration of infection . Treatment thus comprises symptomatic relief . Getting plenty of rest , drinking fluids to maintain hydration , and gargling with warm salt water are reasonable conservative measures . Much of the benefit from treatment is , however , attributed to the placebo effect .

= = Symptomatic = =

Treatments that help alleviate symptoms include simple analgesics and antipyretics such as ibuprofen and acetaminophen / paracetamol . There is not good evidence for cough medicines . They are not recommended for use in children due to a lack of evidence supporting effectiveness and the potential for harm . In 2009 , Canada restricted the use of over @-@ the @-@ counter cough and cold medication in children six years and under due to concerns regarding risks and unproven benefits . The misuse of dextromethorphan ( an over @-@ the @-@ counter cough medicine ) has led to its ban in a number of countries .

In adults antihistamines may improve symptoms in the first day or two ; however , there is no longer @-@ term benefit and they have adverse effects such as drowsiness . Other decongestants such as pseudoephedrine are effective in adults . Ipratropium nasal spray may reduce the symptoms of a runny nose but has little effect on stuffiness .

Due to lack of studies , it is not known whether increased fluid intake improves symptoms or

shortens respiratory illness , and there is a similar lack of data for the use of heated humidified air . One study has found chest vapor rub to provide some relief of nocturnal cough , congestion , and sleep difficulty .

#### == Antibiotics and antivirals ==

Antibiotics have no effect against viral infections or against the viruses that cause the common cold . Due to their side effects , antibiotics cause overall harm but are still frequently prescribed . Some of the reasons that antibiotics are so commonly prescribed include people 's expectations for them , physicians ' desire to help , and the difficulty in excluding complications that may be amenable to antibiotics . There are no effective antiviral drugs for the common cold even though some preliminary research has shown benefits .

#### == Alternative medicine ==

While there are many alternative treatments used for the common cold , there is insufficient scientific evidence to support the use of most . As of 2014 there is insufficient evidence to recommend for or against honey . As of 2015 there is tentative evidence to support nasal irrigation . Zinc has been used to treat symptoms , with studies suggesting that zinc , if taken within 24 hours of the onset of symptoms , reduces the duration and severity of the common cold in otherwise healthy people . Due to wide differences between the studies , further research may be needed to determine how and when zinc may be effective . Whereas zinc lozenges may produce side effects , there is only a weak rationale for physicians to recommend zinc for the treatment of the common cold . Some zinc remedies directly applied to the inside of the nose have led to the loss of the sense of smell .

Vitamin C 's effect on the common cold , while extensively researched , is disappointing , except in limited circumstances : specifically , individuals exercising vigorously in cold environments . There is no firm evidence that Echinacea products provide any meaningful benefit in treating or preventing colds . It is unknown if garlic is effective . A single trial of vitamin D did not find benefit .

#### == Prognosis ==

The common cold is generally mild and self @-@ limiting with most symptoms generally improving in a week . Half of cases go away in 10 days and 90 % in 15 days . Severe complications , if they occur , are usually in the very old , the very young , or those who are immunosuppressed . Secondary bacterial infections may occur resulting in sinusitis , pharyngitis , or an ear infection . It is estimated that sinusitis occurs in 8 % and ear infection in 30 % of cases .

#### == Epidemiology ==

The common cold is the most common human disease and affects people all over the globe . Adults typically have two to five infections annually , and children may have six to ten colds a year ( and up to twelve colds a year for school children ) . Rates of symptomatic infections increase in the elderly due to declining immunity .

Native Americans and Inuit are more likely to be infected with colds and develop complications such as otitis media than Caucasians . This may be explained by issues such as poverty and overcrowding rather than by ethnicity .

#### == History ==

While the cause of the common cold has only been identified since the 1950s , the disease has been with humanity since ancient times . Its symptoms and treatment are described in the Egyptian Ebers papyrus , the oldest existing medical text , written before the 16th century BCE . The name "

cold " came into use in the 16th century , due to the similarity between its symptoms and those of exposure to cold weather .

In the United Kingdom , the Common Cold Unit was set up by the Medical Research Council in 1946 and it was where the rhinovirus was discovered in 1956 . In the 1970s , the CCU demonstrated that treatment with interferon during the incubation phase of rhinovirus infection protects somewhat against the disease , but no practical treatment could be developed . The unit was closed in 1989 , two years after it completed research of zinc gluconate lozenges in the prophylaxis and treatment of rhinovirus colds , the only successful treatment in the history of the unit .

= = Society and culture = =

The economic impact of the common cold is not well understood in much of the world . In the United States , the common cold leads to 75 ? 100 million physician visits annually at a conservative cost estimate of \$ 7 @. @ 7 billion per year . Americans spend \$ 2 @. @ 9 billion on over @-@ the @-@ counter drugs and another \$ 400 million on prescription medicines for symptom relief . More than one @-@ third of people who saw a doctor received an antibiotic prescription , which has implications for antibiotic resistance . An estimated 22 ? 189 million school days are missed annually due to a cold . As a result , parents missed 126 million workdays to stay home to care for their children . When added to the 150 million workdays missed by employees suffering from a cold , the total economic impact of cold @-@ related work loss exceeds \$ 20 billion per year . This accounts for 40 % of time lost from work in the United States .

= = Research directions = =

Antivirals have been tested for effectiveness in the common cold ; as of 2009 , none had been both found effective and licensed for use . There are ongoing trials of the anti @-@ viral drug pleconaril which shows promise against picornaviruses as well as trials of BTA @-@ 798 . The oral form of pleconaril had safety issues and an aerosol form is being studied . DRACO , a broad @-@ spectrum antiviral therapy , has shown preliminary effectiveness in treating rhinovirus , as well as other infectious viruses .

The genomes for all known human rhinovirus strains have been sequenced .