Common Cold (Coryza)

Synonym: coryza

The common cold is an acute, self-limiting, viral inflammation of the mucosa of the upper respiratory tract. It causes nasal discharge and congestion, sneezing, a sore throat and a cough. The common cold actually describes an array of similar conditions caused by a vast number of different viruses. It is most often caused by infection with rhinoviruses (50-80%) and coronaviruses. It may also be due to infection by influenza viruses, parainfluenza viruses, respiratory syncytial virus, enteroviruses and adenovirus.

Transmission of the infection

Routes of transmission vary between viruses but include:

- Inhalation of airborne respiratory droplets from people infected with the virus.
- Direct contact with infectious secretions. Some viruses may be spread by hand or skin contact.

Transmission most commonly occurs in the home, in schools and in daycare centres. The main reservoir of viruses is in young children. This is because they are more vulnerable to infection, as they have not yet developed the relevant antibodies, they shed the virus for longer following infection and they are in close contact with others.

Epidemiology

- Adults have an average of two to three colds a year. Children have an average of five to six colds a year. Young children in nursery schools may average up to twelve colds per year.
- Adults who are in contact with young children have more colds than those who are not.
- Annual epidemics occur within the colder months in temperate climates and during the rainy season in the tropics.
- There are over 200 viruses which cause colds; many people with cold symptoms are found to be infected with several viruses at the same time.

Presentation

- The most frequent symptoms are nasal discharge, nasal obstruction, sneezing, sore throat, general malaise and cough. Hoarseness, loss of taste and smell, mild burning of the eyes and a feeling of pressure in the ears or sinuses, due to obstruction and/or mucosal swelling, may also occur. Headache and fever tend to be less common symptoms.
- Cough is associated with 30% of colds and tends to start on about the fourth or fifth day when nasal symptoms decrease.
- There may be a mild increase in body temperature. Infants and young children are more likely to develop higher temperatures.
- In infants there may be irritability, snuffles resulting in difficulty feeding, and diarrhoea. Diagnosis may be difficult and fever can be the main symptom during the early part of the illness.

Differential diagnosis

Adults

- Allergic rhinitis: nasal itching, sneezing, watery rhinorrhea, and nasal obstruction. It is also often accompanied by itchy, watery eyes. It can be perennial, seasonal, or due to occupational exposure.
- Non-allergic rhinitis: presents with chronic nasal symptoms.
- Pharyngitis: acute pharyngitis is caused by a variety of organisms, including the adenoviruses and Streptococcus pyogenes. This pharyngitis is often more severe than the mild-to-moderate pharyngeal discomfort in the common cold.
- Influenza: initially presents with systemic symptoms, including fever, rigors, headaches, myalgia, malaise and anorexia.
- Infectious mononucleosis (glandular fever): presents with persistent severe sore throat, fever, cervical lymphadenopathy and malaise; it is particularly common in teenagers and young adults.
- Whooping cough: the cough may develop later but is characteristic and is much more severe than that associated with the common cold.

Children

- In addition to the above list, consider a foreign body in the nose. The discharge is unilateral, purulent, foul-smelling and blood-stained.

Infants

- Consider the possibility of a more serious condition - eg, meningitis, septicaemia, pneumonia.

Management
General advice

- Explain that there are no drugs of proven benefit for the prophylaxis or treatment of the common cold, although many things have been suggested. Medical management is centred around providing symptomatic relief.
- Provide advice about the usual natural history of the illness and average total length of illness. (Guidelines from the National Institute for Health and Care Excellence (NICE) state the average total length of illness is 10 days[3]. One systematic review showed 90% of children are better within 15 days[4].)
- Explain that antibiotic treatment of upper respiratory tract infection (URTI) does not alter the clinical outcome of the illness or prevent further complications[5]. Explain that antibiotics may also have side-effects - eg, diarrhoea, vomiting and rash.
- Ensure adequate fluid intake. (There are no systematic reviews to recommend or not recommend the traditional advice of increasing fluid intake[6].)
- Address any underlying concerns. Taking the time to educate people that colds are self-limiting and have no specific curative treatment may reduce anxiety and prevent unnecessary visits to the doctor in the future.
- Advise adequate rest but that there is usually no need to take time off school and work.
- Advise hygiene measures to reduce spread: frequent hand-washing, avoiding sharing towels and toys, etc.
- Advise about self-care and over-the-counter measures which may help with symptoms (see below).

Self-care and over-the-counter options for symptom control

Some people may get relief from one or more of the following:

- Steam inhalation - eg, by sitting in the bathroom while running a hot shower. (Beware of the risk of scalding, particularly in young children; also, evidence of effectiveness is limited[7].)
- Vapour rubs applied to the back or chest.
- Gargling with salt water.
- Sucking boiled sweets or sore-throat lozenges.
- Nasal drops (sodium chloride 0.9%) for nasal congestion. These may be useful for infants who are having difficulty feeding.
- Over-the-counter analgesia. Paracetamol and/or ibuprofen may be helpful for sore throats, headaches or temperatures. Advise these are only used in children under the age of 5 years who have a fever or are distressed.
- Intranasal decongestants (short-term use only)
- Systemic decongestants, often combined with analgesics in over-the-counter preparations for the common cold. These have a very small and very short-term benefit.
- Cough medicines. (Currently there is no good evidence for or against their effectiveness[8].)

Cough classification advice

Evidence does NOT currently support the use of the following:

- Intranasal steroids[10].
- Echinacea[12].
- Vitamin C[13].
- Zinc. (May reduce symptom duration but there is a high risk of adverse reaction, and data are of a heterogeneous nature[14].)
- Chinese herbal medicines (data are lacking[15]).
- Garlic[16].

Over-the-counter treatments for children under the age of 6 years

Over-the-counter cough and cold measures should not be used in children under the age of 6 years. A warm drink containing honey and lemon may be used, or simple cough medicines containing honey, lemon or glycerine. There is no strong evidence for the effectiveness of honey for cough but it seems to be more effective than no treatment[17]. However, honey is not recommended for babies aged under 1 year because of a theoretical risk of infant botulism.

In 2009, the Medicines and Healthcare products Regulatory Agency (MHRA) advised that cough and cold remedies containing the following ingredients should NOT be used in children under the age of 6 years, as the risk-benefit balance is unfavourable[18]:

- Antitussives (dextromethorphan and pholcodine).
- Expectorants (guaifenesin and ipecacuanha).
- Nasal decongestants (ephedrine, oxymetazoline, phenylephrine, pseudoephedrine, and xylometazoline).
- Antihistamines (brompheniramine, chlorphenamine, diphenhydramine, doxylamine, promethazine, and triprolidine).
Follow-up
Advise people to return if their symptoms are worsening, or if they have not improved after two weeks. For young children and babies, advise early review if they are not feeding, if there are any symptoms of dehydration, if they have a persistent fever or if they have any difficulty breathing. Consider arranging a review for people at high risk of complication (eg, significant comorbidity, immunosuppression) and advise them to attend urgently if their condition worsens.

Complications[1]
Complications are usually due to viral spread, or secondary bacterial infection. They are more likely in:

- Smokers.
- Those with immunosuppression through disease or treatment.
- Young children born prematurely.
- Elderly people.
- Those with significant comorbidity, particularly asthma, chronic obstructive pulmonary disease (COPD), diabetes mellitus, and cystic fibrosis, as well as those with any significant cardiac, renal, liver or neuromuscular disease.

Common complications include:

- Sinusitis (0.5-2% of cases).
- Otitis media (as many as 20% of young children with the common cold).
- Croup in very young children and babies.
- Chest infections: bronchiolitis in the very young, acute bronchitis, pneumonia, and exacerbations of COPD or asthma.

Prognosis

- In the majority, the common cold is a mild, self-limiting illness.
- The common cold usually lasts around a week in adults and 10-14 days in children.
- In 90% of children, symptoms have resolved by 15 days[4].
- Cigarette smokers are likely to have a more severe and more prolonged illness than non-smokers and are significantly more likely to develop a chest infection as a complication.
- People with COPD who have a rhinovirus infection are more likely to have a longer duration of illness, a more severe illness and to cough for longer afterwards than those without lung disease[19].

Prevention

- Preventing the spread of the common cold is very difficult but simple measures to prevent the spread of acute respiratory infections, such as hand washing (especially around younger children), wearing masks and wearing gloves, have been shown to be effective[20].
- The effectiveness of adding virucidal or antiseptics to normal handwashing to decrease transmission remains uncertain[20].
- People with colds should also avoid close contact (eg, hugging, kissing) and avoid sharing towels and flannels. Children should be discouraged from sharing toys belonging to a child with a cold.
- Some work has been done on looking for a vaccine for the common cold but this is difficult because the viruses are so numerous and so various[21].

Further reading & references

- Common Cold Centre; Cardiff University

1. Common cold; NICE CKS, August 2016 (UK access only)


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