

Difference Between Hayfever and Cold

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Key Difference – Hayfever vs Cold

A runny nose in the rainy season is not something to be really worried about. Hayfever and cold are the two most common conditions that give rise to nasal symptoms such as a runny nose and sneezing. Hayfever, which is also known as allergic rhinitis, is defined as nasal discharge or blockage and sneezing attacks that last for more than an hour on most of the days due to an [allergen](#). Cold is a highly infectious illness that causes an array of nasal symptoms. As their definitions clearly state, the key difference between hayfever and cold is that **hayfever is caused by noninfectious agents whereas cold is caused infectious agents such as viruses.**

What is Hayfever?

Hayfever, which is also known as **allergic rhinitis**, is defined as nasal discharge or blockage and sneezing attacks that last for more than an hour on most of the days due to an allergen. It can be of two types: seasonal or intermittent [rhinitis](#) which occurs during a limited period of the year and perennial or persistent rhinitis which occurs throughout the year.

Pathophysiology

[IgE](#) antibodies are produced against the allergen by the [B cells](#). IgE then binds to the [mast cells](#). This cross-linking leads to degranulation and the release of chemical mediators such as histamine, prostaglandin, leukotrienes, cytokines and proteases (tryptase, chymase). Acute symptoms like sneezing, pruritus, rhinorrhea and nasal congestion are caused by these mediators. Sneezing may occur within few minutes from the entry of an allergen into the nasal cavity and it is followed by an increase in the nasal secretions and blockage which are due to the action of histamine. Furthermore, [eosinophils](#), [basophils](#), [neutrophils](#) and [T lymphocytes](#) are recruited to the site by the antigen presentation to the T cells. These cells cause irritation and edema resulting in the nasal obstruction.

Seasonal Allergic Rhinitis

Seasonal rhinitis, which is also known as hay fever, is one of the commonest allergic disorders with prevalence rates exceeding 10% in some parts of the world. Sneezing, nasal irritation and watery nasal secretions are the common clinical features. But some patients may suffer from itching of the eye, ear, and soft palate.

Tree pollens, grass pollens, and mold spores are the usual culprits that act as the allergens to provoke our immune system. Seasonal allergic rhinitis may occur at different times of the year in different regions mainly because of the variation in the pattern of pollination.

Perennial Allergic Rhinitis

About 50% of the patients with perennial rhinitis may complain of sneezing or watery rhinorrhea and the others usually complain of nasal blockage. These patients rarely can have eye and throat symptoms as well.

Inflammatory mucosal swellings can obstruct the drainage of secretions from the sinuses, leading to sinusitis. The most common allergen causing perennial allergic rhinitis is the fecal particles of house dust mite, *Germatophagoides pteronyssinus* or *D. farinae* which are invisible to the naked eye. These mites are found in dust all over the house especially in damp places. The highest concentration of mites is found in human beddings. Next commonest allergen is the proteins derived from urine, saliva or skin of domestic pets, especially cats. Perennial rhinitis makes the nose more responsive to nonspecific stimuli like cigarette smoke, household detergents, strong perfumes, washing powder and traffic fumes.



Figure 01: Hayfever

Investigations and Diagnosis

History of the patient is important in identifying the allergen. Skin prick test is useful but it is not a confirmative test. Allergen-specific IgE antibody levels in the blood can be measured but it is expensive.

Treatments

- Allergen avoidance
- H₁ antihistamines- commonest therapy (ex: Chlorphenamine, Hydroxyzine, Loratidine, Desloratadine, Cetirizine, Fexofenadine)
- Decongestants
- Anti-inflammatory drugs
- Corticosteroids- most effective
- Leukotriene

What is Cold?

Cold is a highly infectious illness that causes an array of nasal symptoms. A wide range of respiratory viruses such as rhinovirus, adenovirus, and coronavirus can cause this disease.

Out of the viruses mentioned previously rhinovirus is the commonest causative agent of cold. There are different strains of these viruses making it difficult for our body to develop immunity to them. The infectivity is highest during the initial stage of the infection. The spread of pathogens happens through the contact with the respiratory secretions of infected patients. On average an individual suffers 2-3 attacks of cold per year but the incidence decreases with age, probably due to the accumulation of resistance against various strains of viruses.

There is an incubation period of 12 hours to 5 days after which the symptoms begin to appear.

Clinical Features

- Malaise
- Slight pyrexia
- Sneezing
- Profuse watery nasal discharge
- In a minority of the cases, there can be secondary bacterial infections



Figure 02: Cold

Treatment

- Nasal decongestants
- Pain relievers

- Cough syrup
- Since cold is caused by viruses, there is no use of taking antibiotics.

What are the Similarities Between Hayfever and Cold?

- Nasal symptoms are prominently seen in both Hayfever and Cold

What is the Difference Between Hayfever and Cold?

Hayfever vs Cold	
Hayfever is a nasal discharge or blockage and sneezing attacks that last for more than an hour on most of the days due to an allergen.	Cold is a highly infectious illness that causes an array of nasal symptoms.
Cause	
This is caused by the exposure to allergens.	This is caused by viruses such as rhinovirus, adenovirus, and coronavirus.
Clinical Features	
<p>Clinical features are,</p> <ul style="list-style-type: none"> • Malaise • Slight pyrexia • Sneezing • Profuse watery nasal discharge • In a minority of the cases, there can be secondary bacterial infections 	Nasal irritation, profuse watery discharge and irritation of the ear and soft palate are the common clinical features.

Summary – Hayfever vs Cold

Hayfever, also known as allergic rhinitis, is defined as nasal discharge or blockage and sneezing attacks that last for more than an hour on most of the days due to an allergen. Cold, on the other hand, is a highly infectious illness that causes an array of nasal symptoms. The main difference between hayfever and cold is that hayfever is caused by noninfectious agents whereas cold is caused by infectious agents such as viruses.

References:

1. Kumar, Parveen J., and Michael L. Clark. Kumar & Clark clinical medicine. Edinburgh: W.B. Saunders, 2009.

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