

# Diseases of the upper respiratory tract

**Upper respiratory tract disease** is one of the most common causes of morbidity in children of all ages. The etiology is usually viral at first (*adenoviruses* predominate in infants and toddlers, *rhinoviruses*, *coronaviruses*, *influenzae A and B virus*, *parainfluenzae* in school-age children). Bacterial infections then become more easily attached to the virus-damaged mucosa. The main respiratory pathogens are *Haemophilus influenzae*, *Staphylococcus aureus*, *Streptococcus pyogenes*, *Moraxella catarrhalis*.

## Acute upper respiratory tract disease

- Acute rhinitis and rhinopharyngitis;
- acute tonsillitis and tonsillopharyngitis;
- acute (rhino)sinusitis;
- acute otitis media;
- acute epiglottitis;
- acute subglottic laryngitis.

## Chronic upper respiratory tract disease

- Chronic rhinitis (allergic, infectious, non-allergic non-infectious);
- chronic nasopharyngitis;
- chronic pharyngitis;
- chronic tonsillitis.

## Acute subglottic laryngitis

Acute subglottic laryngitis (ASL) is an inflammatory swelling in the subglottic space in an acute viral infection that can lead to sudden suffocation. Upper airway obstruction is caused by inflammatory swelling of the mucosa and submucosal space in the larynx. Etiological agents include *parainfluenza*, *adenoviruses*, *RSV*. The frequency is very common, especially in the winter months (November-April). Children from infancy to about 6 years of age are most often affected, but exceptions are the rule.

[🔍 For more information see Acute Laryngitis.](#)

## Acute epiglottitis

Acute epiglottitis is a phlegm of the laryngeal flap during invasive hemophilic infection, which can subsequently lead to sepsis. *Haemophilus influenzae type b* rarely other causative agents, is used etiologically. Children aged 2-7 are most often affected. The introduction of vaccination against *Haemophilus influenzae type b* into the routine calendar has practically eliminated the disease.

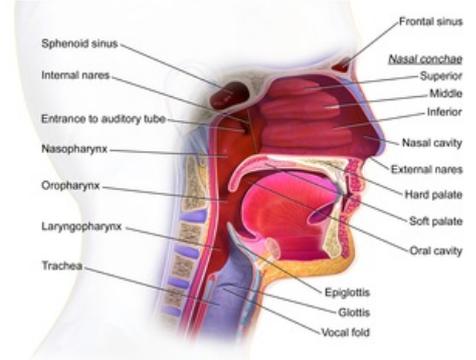
[🔍 For more information see Acute epiglottitis.](#)

## Bacterial tracheitis

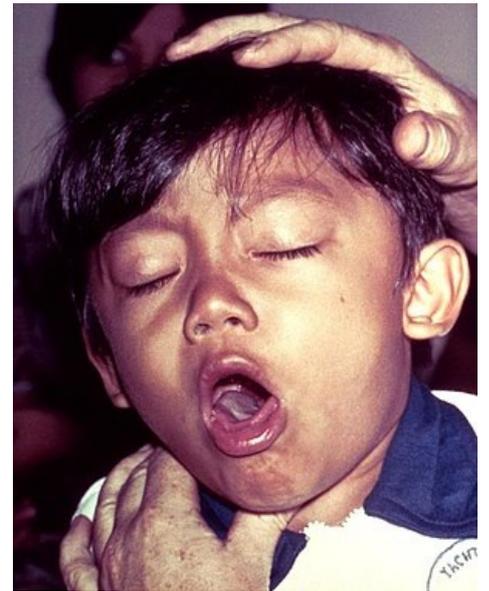
It is a purulent bacterial inflammation of the trachea with a tendency to form pablans, most often in children aged 6 months to 12 years. The most common cause are *Staphylococcus aureus*, *Haemophilus influenzae* and *Streptococcus pneumoniae*. Initially, patients present a picture of an upper respiratory tract infection lasting several hours to days. Gradually, **inspiratory dyspnea** develops, but mostly with indistinct **stridor**, the **cough** is barking to tracheal, sore throat is constant, voice is hoarse, but there is no dysphagia. At the same time, there is an onset of **alteration in the general condition** (clinical picture of "toxic", non-improving laryngitis). The auditory finding is poor, we can find bronchial phenomena. Due to severe upper airway obstruction and alterations in the general condition, we almost always approach intubation and artificial ventilation.

[🔍 For more information see Bacterial tracheitis.](#)

## Differential diagnostics



The Upper Respiratory Tract



Acute subglottic laryngitis

diseases/symptoms	Acute laryngitis	Bacterial tracheitis	Acute epiglottitis
<b>child's position</b>	does not affect suffocation	does not affect suffocation	the child suffocates while lying down, resists laying down, wants to sit in a forward bend
<b>the nature of breathing</b>	hard, pulls the soft parts of the chest	inspiratory dyspnea, but with mostly indistinct stridor	careful, superficial, the child is focused on breathing
<b>swallowing</b>	well	usually good	bad, does not swallow saliva, which can therefore flow out of the mouth
<b>body temperature</b>	usually subfebrile	febrile	febrile
<b>cough</b>	dry, laryngeal	dry, laryngeal	there is no cough, the child is "afraid" to cough due to a sore throat
<b>stridor</b>	inspirational	inspirational	cough is a bubbling, sipping sound of accumulated mucus in inspiration and expiration
<b>occurrence</b>	seasonal occurrence	occurrence is at any time during the year	occurrence is at any time during the year
<b>onset and course</b>	sudden onset, usually at night, worsening within tens of minutes	gradual development of dyspnoea	start at any time within 24 hours, worsening within hours
<b>reactions to corticosteroids and adrenaline</b>	relief of symptoms within tens of minutes	no effect	no effect
<b>sore throat</b>	-	sore throat usually does not occur	distinctive
<b>objective finding in the throat</b>	bluetongue, slender epiglottis, little secretion	normal, ev. bluetongue finding	swollen, red epiglottis and accumulated mucus
<b>age</b>	3 months to 5 years	6 months to 12 years	2 to 7 years

## Retropharyngeal abscess / phlegmon

Retropharyngeal abscess (RA) is a deep throat infection that typically occurs in children. If the infection spreads further, it can be life-threatening. RA most often occurs on the basis of abscessed lymphadenitis, after a previous infection of the upper respiratory tract, typically between 2-4th year of life. RA is very similar to epiglottitis with its symptoms.

 For more information see *Retropharyngeal abscess*.

## Peritonsillar abscess

The initial symptomatology of the peritonsillar abscess resembles epiglottitis. But the most common age group is **older schoolchildren**. Children tend to have a **fever**, a **muffled voice** and may **drool**. Trismus can also be a characteristic symptom. With a larger abscess, children complain of shortness of breath.

In the aspect of the oropharynx, we see asymmetric swelling of the floor arches, unilateral coating angina with accentuation of pain. The diagnosis is confirmed by an ENT doctor. With a fluctuating abscess, a surgical incision and drainage are indicated. Recently, it has become possible to use an intraoral ultrasound probe in the differential diagnosis of abscess and cellulitis.

## Links

### Related articles

- Acute inflammation of the upper respiratory tract (<http://solen.cz/pdfs/ped/2009/05/15.pdf>)
- Chronic inflammation of the upper respiratory tract (<http://solen.cz/pdfs/med/2007/10/07.pdf>)
- Inflammation of the upper respiratory tract (<http://solen.cz/pdfs/med/2004/01/10.pdf>)

### References

1. HAVRÁNEK, Jiří: *Infekce horních dýchacích cest* [učební text]

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