

Croup

A typical croup story:

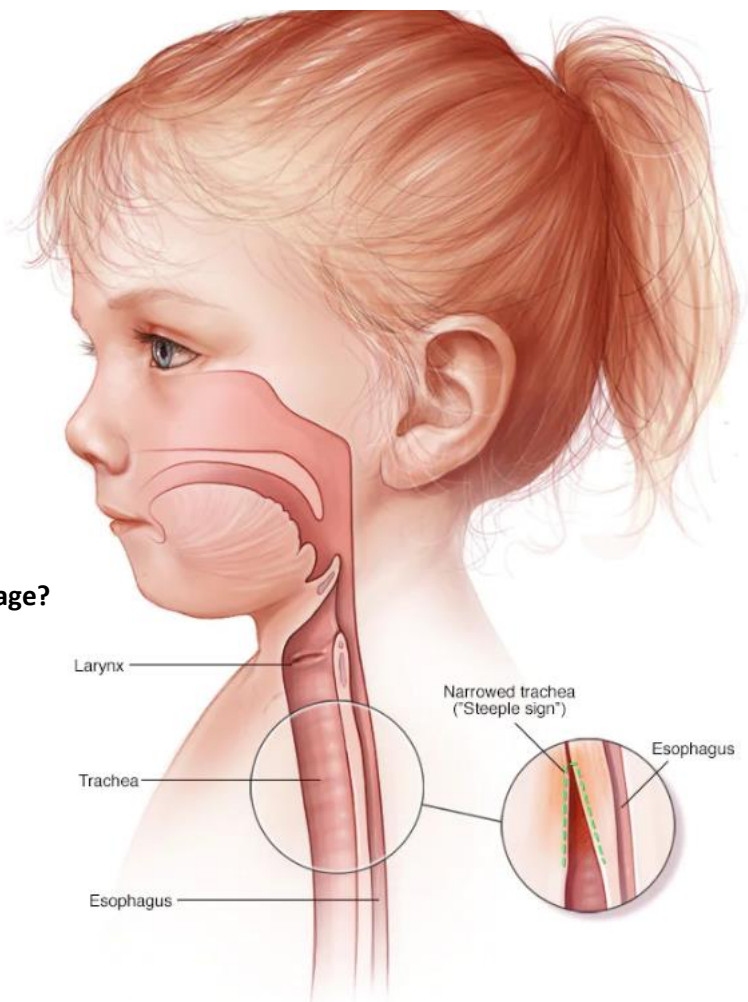
Once upon a time Hudson gets picked up from daycare with symptoms of yet another runny nose. It seems like he just got over the last cold! But you suppose it is that time of year. During dinner and bath time you hear him cough a few times and it sounds like he has a bit of a hoarse voice, but nothing too concerning. You know the drill on the supportive care for these viral colds- saline and nasal suction, cool mist humidifier in his room, prop the head of the bed, treat fever with Tylenol or Motrin if needed, a little honey for the cough, now that he's 1 year old. Off to bed he goes and falls asleep easily, with just a bit of coughing. You awaken startled to hear him crying on the baby monitor a few hours later and wonder why it sounds like a baby seal is in his crib with him! More worrying still- when you go to comfort him you hear a high pitched squeaking noise when he tries to breathe in in between barky, seal like coughs. He feels like he has a fever now, he is crying and very upset, and seems to be working pretty hard to breathe. You wonder how things have taken a turn for the worse so quickly and what is going on?!

Definition and Symptoms

Croup is a respiratory virus presenting with a very unique set of symptoms, as seen in the story above. It is typically caused by the parainfluenza or influenza virus (occasionally COVID-19 can also be the culprit). In infants and young children, the symptoms are commonly a “seal-like barky cough” that is most prominent at night. Another sound, called stridor is not uncommon when the child is upset or agitated. In more severe cases, stridor is also present at rest. The illness presentation in an older child, teenager, or adult can be very different, resulting in mild cold symptoms and laryngitis, with no breathing difficulty.

Why does croup present so differently based on age?

Croup affects the voice box (larynx) and windpipe (trachea), causing swelling. Because the larynx is smaller in those who are younger, when the area becomes narrower, it results in noisy and difficult breathing. In someone older, the larynx will be larger, and therefore the swelling does not narrow the airway enough to cause breathing difficulty, but just enough to cause laryngitis.



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Home Treatment:

- **Fever reducers:** If temperature over 100.4 is present, a fever reducer may be helpful to decrease fever and discomfort.
- **Breathing steamy or cold air:** Symptoms may improve when sitting in a bathroom with the doors shut while the shower water runs on high. Another helpful remedy could be walking outside when it's cold out or even briefly breathing cold air from the freezer.
- **Avoid agitation:** because agitation can worsen stridor, which can worsen breathing, keep your child as comfortable as possible. This could include lots of cuddling, eating a favorite food, or watching a special show.

Is office or emergency room treatment needed?

Reasons to seek care urgently include:

- Struggling to breathe easily
- Presence of retractions or pulling with each breath between the ribs or in the neck,
- Has high pitched "creaking" or whistling sound, called inspiratory stridor, when at rest

Without these symptoms, mild to moderate cases of croup can typically be managed in office by giving a one-time dose of an oral steroid to reduce the inflammation in the larynx and trachea and help open up the airway. Occasionally in severe cases, inhaled or IV medications are needed.

Though croup can be very scary in the moment, the prognosis is very good; most children will only require the single dose of steroids to resolve symptoms and feel better within 3-5 days. Antibiotics and cough suppressants are not helpful, and should not be given for croup.

When can he/she be around others and back at school?

Croup is spread by direct contact with mucus, or within 3 feet of someone who is coughing or sneezing. Children are contagious the first 3 days of illness or until fever free for 24 hours.

Resources - What to look and listen for:

- This video depicts breathing difficulty with RSV bronchiolitis in infants. Though this is a different illness, the video shows retractions and labored breathing that could also be present with croup. [RSV bronchiolitis breathing videos](#)
- This video demonstrates what retractions could look like in an older child. Retractions can be present with breathing difficulty of other causes as well, such as asthma. [Retractions: Video](#)
- This is an audio clip demonstrating both the sounds of inspiratory stridor, as well as the barky-seal-like cough that is the classic croup-cough. [Croup: sound clip with inspiratory stridor and seal-like cough](#)



Seek urgent care if...

- There is high pitched "creaking" or whistling sound, called inspiratory stridor, at rest
- He/she can't speak or make sounds due to lack of breath or is struggling to catch breath
- He/she has bluish color to lips or fingernails
- There is drooling or extreme difficulty swallowing saliva