

# Croup



*Better go check on him ...  
He's either talking in his sleep or he has croup*

Croup is an often-surprising middle-of-the-night malady that produces a barky seal-like cough in children who seemed just fine at bedtime.

Any virus that causes cold-like symptoms of runny nose, cough, runny eyes, and sometimes fever, can also cause croup. Think parainfluenza, influenza (flu), RSV, adenovirus, rhinovirus, and now Covid-19. Any of these viruses can land in a child's larynx, or voice box, and cause hoarseness, barky cough, and a weird guttural sound on breathing inward, called "stridor." Croup is the name we give the constellation of symptoms, not the name of the virus that causes it.

An adult with the same exact illness would sound hoarse, but would likely not have the strange barky cough or noisy breathing.

We have a great podcast on this subject, but for those who prefer to read medical advice, please read on.

# Ways to help your child when they wake up with croup

**Stay calm.** Children are frightened when they wake up coughing and find it hard to take in a deep breath. Parents are often frightened too. Even if you are worried, exude calmness in order to help your child settle down.

**Create a rain-forest like environment.** Go into the bathroom, run a hot shower, and hunker down with a book to read to your child. The steam helps shrink the uncomfortable swelling in the voice box. Wait for about 15 minutes for the barky cough and the harsh guttural breathing to subside.

You can also recreate a misty environment by cranking a humidifier in your child's bedroom. To avoid the risk of burns, we recommend a cool mist humidifier, not a hot water vaporizer. The temperature of the mist does not matter; it is the mist itself that children with croup find soothing.

**Go outside with your child.** Wrap them in a blanket and head into the cool night air. This trick works as well as the steamy environment trick. Each winter we hear of our patients with croup who's parents put them into the car to drive to the nearest Emergency Department, only to find that by the time they arrive, their child's croupy cough and noisy breathing have resolved.

**Treat any sore throat pain.** Offer your child acetaminophen (brand name Tylenol) or ibuprofen (brand names Motrin, Advil) because easing the pain calms your child with croup and helps them to breathe easier.

# When to take your child with croup to the emergency department

Most children with croup can be managed at home, but some need extra medical care. Head to the nearest emergency department or call 911 if your child has these symptoms:

- **Turns blue or pale with coughing.** Turning red is ok, but turning blue or pale means your child needs oxygen therapy.
- **Is unable to swallow, drools uncontrollably, refuses to drink.**
- **Has labored breathing.** See this link for example of what this can look like. If you see your child's chest or belly moving in and out with every breath, you see your child's ribs with breathing, you see their nostrils flare with every breath, or you hear that guttural noise (stridor) with every breath inward even if your child is calm, then your child needs emergent medical care
- **Shows a change in mental state.** If your child fails to recognize you, seems too lethargic to respond appropriately to your care, or your "parent instinct" tells you something is wrong with your child's thinking, they may need emergent care.

Strangely, a scary night of croup can be followed by a calmer day. Your markedly improved child may show merely some mild hoarseness or mild stuffy nose. Be aware that your child might have another night or two of croup symptoms, even after they barely cough during the day. So make sure your child and you take a nap in preparation for another possible rough night.

## When to expect improvement

Most children with croup improve after two or three nights. Then, they develop more classic "cold" symptoms of runny nose and more "normal" sounding cough. Because Covid-19 virus is

becoming a more common cause of croup, have your child tested so you know how long they need to stay home from school or daycare.

Talk to your child's pediatrician if your child's seal-like barky cough or cold symptoms last more than a week without improvement. Call sooner if your child seems to worsen or you have further concerns about your child. Know that some children are "Croupers" and tend to get the same croup symptoms with almost any cold virus. But take heart, even the croupers will be less croupy over time. It's fairly uncommon to see a grade-school aged child with croup. Until then, you never know when you'll hear a little seal in the middle of the night.

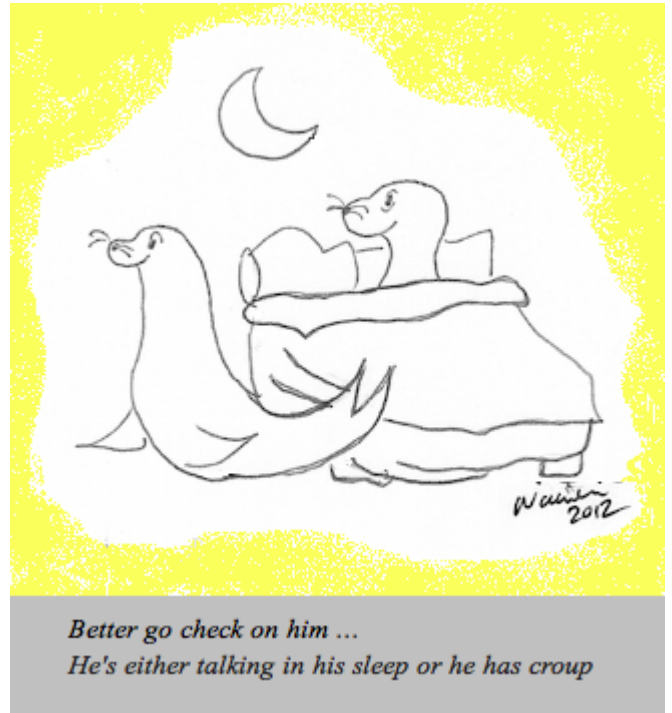
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## **Croup's cropping up**

We can tell from this past week at the office that **croup** season has started. DON'T PANIC! Read on to learn what to look for. Please also listen to our [podcast](#) on this same subject. Dr. Lai heard one mom say that she listened to the podcast three times in one night...nights with croup can be very long indeed.



You wake up in the middle of the night to the sound of a seal barking...inside your house. More specifically, from inside a crib or toddler bed. Unless you actually have a pet seal, that sound is likely the sound of your child with croup.

“Croup” is the lay term for any viral illness causing swelling of the voice box (larynx) which produces a seal-like cough. The actual medical term is “laryngotracheobronchitis.” In adults, the same viruses may cause laryngitis and hoarseness, but minimal cough. In children the narrowest part of a child’s airway is his voice box. So not only does the child with croup sound hoarse when he talks and cries, but since he breathes through a much narrower opening, when he forces air out with a cough, he will sound like a barking seal. When a kid with croup breathes in, he may produce a weird guttural noise, called “stridor.”

Many viruses cause croup, including flu (influenza) viruses. Therefore, a flu vaccine can protect against croup. While no antibiotic or other medicine can kill the croup causing viruses, here are some ways to help your child feel better.

**What to do when your child has croup:**

**Stay calm.** The noisy breathing and barky cough frighten children and their parents alike. It's easier for the child to breathe when he is calm rather than anxious and crying. So, even if you are scared, try to act calmly since children take their cues from their parents.

**Try steam.** Run the shower high and hot, close the bathroom door and sit down on the bathroom rug with your child and sing a song or read a book or just rock him gently. The steam in the bathroom can help shrink the swelling in your child's voice box and calm his breathing.

**Go outside.** For some reason, cool air also helps croup. The more misty the better. In fact, many a parent in the middle of the night has herded their barking, noisy breathing child outside and into the cold car (with windows slightly cracked open) to drive to the hospital. Once in the emergency room, the parents are surprised to find a happily sleeping, or wide awake, chatty child, "cured" by the cold night ride.

**Run a humidifier.** A cool-mist humidifier running in your child's room will also help. Make her room feel like a rain forest, or the weather on a really bad hair day, and often the croupy cough will subside. Cool-mist humidifiers in the child's room are safer than hot air vaporizers because vaporizers pose a burn risk. It's the mist that helps, not the temperature of the mist.

**Offer ibuprofen or acetaminophen.** Your child may cough, and then cry, because her throat is sore. Pain relief will make her more comfortable and allow her to get back to sleep.

### **Who needs further treatment?**

Most kids, more than 95%, who come down with croup, get better on their own at home. Typically, croup causes up to three nights of misery punctuated by trips into the cold night air or steam treatments. During the day, kids can seem quite well, with perhaps a slightly hoarse voice as the only reminder of the night's tribulations. Why croup is worse at

night and much better during the daytime hours remains a medical mystery. One theory is, just like ankles swell after one is upright all day, swelling in the voice box increases when people lie down. After the three nights, your child usually just exhibits typical cold symptoms with runny nose, a regular sounding cough, watery eyes, and a possible ear infection at the end. Then brace yourself for next time—kids predisposed to croup tend to get croup the next time a croup causing virus blows into town. But take heart, most kids outgrow the disposition for croup around six years of age.

Some kids do develop severe breathing difficulties. If your child shows any of these symptoms, get emergency medical care:

**Turns pale or blue with coughing.** Turning red in the face with coughing is not as dangerous.

**Seems unable to swallow/unable to stop drooling.**

**Breathing fails to improve** after steam, cool air, humidity, or **breathing seems labored**— nostrils flare with every breath or chest heaves with every breath—pull up their night shirts to check for this. See [this link](#) for an example of labored breathing.

**Mental state is altered:** your child does not recognize you or becomes inconsolable.

Child is **unimmunized** and has a **high fever and drooling** along with his croup symptoms: he may not have croup but rather epiglottitis, most commonly caused by a vaccine-preventable bacteria. This is a different, more severe illness that can be fatal and requires airway management as well as antibiotics in a hospital.

We searched the internet for a good example of what the “seal bark” cough of croup. The best imitation we found is actually the sound of a sea lion. We will have to ask a veterinarian sometime if seals and sea lions get croup. If so, what do they sound like?

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