



St. Vincent Physician Network

Croup Cured with Simple Remedies

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The history is fairly typical. Three year old Robert has had symptoms of a mild respiratory tract infection (cough, runny nose, sneezing, etc.) for several days. He suddenly wakes up at two o'clock in the morning with a cough that sounds like a foghorn. His parents rush half asleep into the bedroom to find their frightened youngster sitting up in bed with a barking cough and breathing with a high pitched crowing sound. Welcome to croup - the middle of the night visitor! Robert's parents, experiencing this illness for the first time and not sure what to do, immediately rush him to the nearest emergency room.

Except for a few rare conditions, croup is caused by different viruses with strange sounding names: respiratory syncytial virus, parainfluenza 1, 2 or 3, influenza A, and the rhinoviruses. Medically, this common pediatric disease occurs because the viral infections causes inflammation and swelling around the larynx (vocal cords) and the trachea (main air tube). The illness most often occurs in youngsters under the age of four, and the croup "season" is usually between October and March. In addition, there are some children who seem to be very prone to croup and get it everytime they have any respiratory infection.

Symptoms that commonly accompany croup include fever, hoarseness, the characteristic seal-like barking cough, stridor (noisy respirations caused by breathing in through a narrowed airway), and the use of abdominal muscles for breathing. For some unknown reason, croup usually gets worse at night. Croup normally lasts for three to six days, each night the croupy cough becoming less menacing than the night before.

Croup can usually be treated at home. First, parents should try to stay calm and not panic. If the child senses you are frightened, this may scare them causing further spasm and narrowing of their air tubes. Humidity is the key to the treatment, and many times moisture is all that is needed to reverse the symptoms. Parents should take their croupy child into the bathroom, close the door, and turn on the shower full hot to steam up the room. Sit with the child on your lap for reassurance and have them breathe the warm humidified air for 20-30 minutes (or until the hot water runs out!) This procedure frequently relieves the labored breathing in just a few minutes and no further medical assistance is necessary. When your child's breathing improves, take them back to their bedroom and start running a cold vapor humidifier. It is sometimes helpful to concentrate the moist air by making a tent over your child with a sheet, using chairs as the framework on either end of the bed. Children with croup may be more comfortable sleeping in a semi-sitting position, so prop them up from behind with pillows. Television, radio, or a good story will help distract parents and child alike and will help you both relax.

Do not let anyone smoke in the house because second hand smoke will irritate the child's airway and make the cough worse. Antibiotics will not help unless a secondary bacterial infection, such as an ear infection, is present. Some physicians will recommend cough medicines for croup and others do not, so check with your child's doctor. Over the counter cold medications do not help and may actually make croup worse by drying up secretions. Acetaminophen can be given to reduce fever if the temperature is making your child irritable. Since the cough sometimes leads to vomiting, offer only clear lukewarm fluids instead of milk and avoid solid foods for a while. If at any time during the night breathing becomes labored again or your child becomes short of breath, take them back into the steamed up bathroom. Warning signs that a trip to the emergency room is necessary include:

- * You are frightened and your intuition says the child is in trouble.
- * The child begins to drool and cannot swallow their own saliva .
- * A repeated trip to the steamed up bathroom does not improve your child's breathing.
- * The child's respirations increase to over 60 per minute and you note severe retractions (drawing in of the neck and chest with each inspiration)
- * Your child is not coughing but is making the crowing sound with each inspiration.
- * The color of the nailbeds, lips or face becomes dusky or blue.
- * The child is unable to keep any fluids down. .

Frequently, the croupy child who is having a lot of trouble breathing at home is cured by the time they arrive at the emergency room. What happens is that the sick child is exposed to the cool moist night air during the trip and this shrinks down the lining of the swollen airway. So don't be embarrassed if you get to the hospital and your child seems perfectly well. Be happy instead! This "treatment" is so common that many parents, seasoned by repeated episodes of croup in their child, drive around the city with car windows open when croup strikes!

At the hospital emergency room, three treatments are currently recommended: breathing humidified air supplemented with oxygen, administration of vaporized racemic epinephrine, and the use of steroids. The humidified oxygen will help moisten secretions and soothe the inflamed respiratory tract surfaces. Epinephrine is given to your child through a breathing machine by mask and will dramatically improve viral croup. Finally, your child may receive an injection of a steroid called dexamethasone or an oral version that is taken for three to four days. Some physicians do not feel that steroids help, but in my experience children who receive them definitely get better faster than those who don't. Your child will also be checked for a secondary bacterial infection and antibiotics prescribed if one is found. After this ordeal, you and your child will return home, exhausted, and probably sleep well for a while.

Physicians caring for children live in fear of croup because of the rare case in which the illness progresses, sometimes quite quickly, to complete blockage of the throat and near suffocation. The most serious of these is epiglottitis, an emergency that requires immediate medical attention. A child with this life-threatening illness becomes sick very quickly-- usually in a matter of hours. The child looks extremely ill with a high fever, trouble breathing, and drooling. The offending bacterium, *Haemophilus influenzae* type B, causes the child's epiglottitis to become swollen, covering not only the trachea but also the esophagus. The child has trouble breathing because their airway is blocked, and they cannot swallow their own secretions because the esophagus is occluded. Admission to the hospital's intensive care floor is required and a breathing tube has to be inserted into the trachea to keep the airway open. Intravenous antibiotics are administered and once the responsible bacteria are destroyed, the airway swelling subsides and the breathing tube is removed. Remember, one of the most important factors to successful treatment of epiglottitis is prompt parental action. Fortunately, epiglottitis is not as common as it once used to be because of the widespread use of the "HIB" vaccine. This immunization given at 2, 4, and 6 months of age with a booster dose at 15 months of age, offers protection against both epiglottitis and meningitis caused by the *Haemophilus influenzae* type B bacterium.

This is the time of year that viral croup makes its rounds, and any parent who has had a croupy child knows that this can be one of the most frightening childhood illnesses. Fortunately, viral croup always seems worse than it is, but parents need to know what they can do to help their child at home, and when to seek prompt medical assistance.