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Croup

Croup is an infection of the voice box (larynx) and windpipe (trachea). It is often mild and most children soon recover. A steroid medicine is usually prescribed to ease symptoms. In some cases severe breathing difficulties develop. A small number of children with croup are admitted to hospital, usually for a short time until symptoms ease.

What is croup?

Croup is an infection of the voice box (larynx) and windpipe (trachea). These are the upper and lower parts of the breathing tube that connects the mouth to the top of the lungs. The usual cause of croup is a viral infection. Several viruses can cause croup.

Who gets croup?

Croup is common in young children and occurs most commonly between the ages of 1 and 3 years. As children become older, their breathing tube becomes firmer and wider. Therefore, croup becomes uncommon after the age of 6 years.

Some children have two or more bouts of croup in their childhood.

Is croup contagious/infectious?

As with coughs, colds, flu and other similar viral infections, there is a chance that you can pass on the infection. In particular, if you are in close contact with others. Croup often occurs in outbreaks or epidemics in the winter.

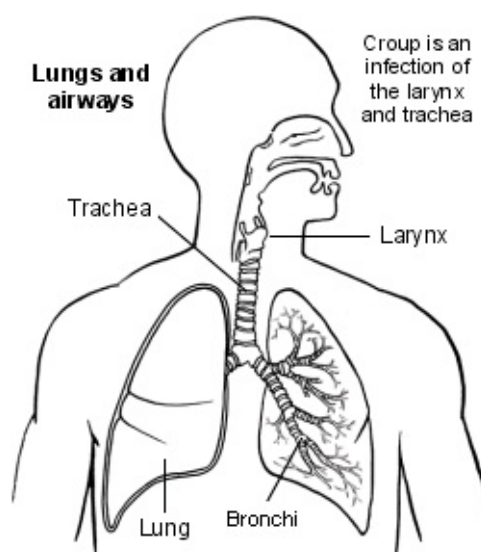
An infection by a virus that causes croup in a young child may cause a cough or sore throat in an older child or adult but is unlikely to cause the breathing symptoms of croup (described below). However, rarely, symptoms of croup can occur in teenagers or adults.

What are the symptoms of croup?

- **Cough**, which is usually harsh and barking. This croupy cough is due to inflammation and swelling of the vocal cords in the voice box (larynx).
- **Breathing symptoms**. The infection causes inflammation on the inside lining of the breathing tube. There may also be a lot of thick mucus. A combination of these can cause narrowing of the breathing tube. The narrowed tube may cause noisy breathing (stridor). Breathing may become difficult if the narrowing becomes worse.
- **Other symptoms** that may occur include a runny nose, hoarseness and sore throat. Croup may follow a cold but can also appear without any earlier illness. Other cold or flu-type symptoms may also occur. For example, a high temperature (fever), feeling unwell, being off food and general aches and pains.

The symptoms are often worse at night. Typically, during the day a child may have a croupy cough with cold symptoms but not be too unwell. However, at night the cough and breathing symptoms often become worse.

Symptoms usually peak after 1-3 days and then improve. A mild but irritating cough may last a further week or so.



How serious is croup?

Symptoms are often fairly mild but sometimes become severe. Many children just get a croup cough with some cold symptoms. Any breathing difficulty is often mild. Parents can expect to have one or two disturbed nights nursing a coughing child. Most children with croup remain at home and soon recover.

The main concern is if severe narrowing of the breathing tube develops. If this occurs then breathing can become difficult. About 1 in 10 children with croup are admitted to hospital for observation. This is usually if symptoms suggest a narrowing of the breathing tube. Most children admitted to hospital come home within 24 hours as symptoms usually improve quickly. In a small number of cases, a ventilator is needed to help the child to breathe. This is just for a short period whilst the infection and inflammation settle down.

What can I do to help a child with croup?

A doctor will normally advise on what to do, or whether hospital admission is needed. The sort of advice your doctor may give is as follows:

- **Be calming and reassuring.** A small child may become distressed with croup. Crying can make things worse. Sit the child upright on your lap if their breathing is noisy or difficult. Let the child find a comfortable position.
- **Lower the high temperature (fever).** If a child has a fever their breathing is often faster and they may be more agitated and appear more ill. To lower a fever:
 - Give **paracetamol liquid** (eg, Calpol®) or **ibuprofen liquid** (eg, Calprofen®).
 - Dress the child lightly if the room is not cold.
- **Give the child lots of cool drinks** (if they are happy to take them).
- **Cool air.** Some people find that it is helpful to have a stroll outdoors, carrying the child upright in the cool fresh air.

Steam used to be commonly advised as a treatment. It was thought that steam may loosen the mucus and make it easier to breathe. However, there is little evidence that this does any good. Also, some children have been scalded by steam whilst being treated for croup. Therefore, steam is not recommended. Also, **do not** make a child with breathing difficulty lie down or drink fluids if they don't want to, as that could make breathing worse.

Other treatments

- **Asteroid medicine** such as **dexamethasone** or **prednisolone** is usually prescribed. Steroid medicines help to reduce inflammation. A single dose often eases symptoms within a few hours. Steroid medicines do not shorten the length of the illness but they are likely to reduce the severity of breathing symptoms.
- **Inhaled adrenaline (epinephrine)** is sometimes used in hospital to shrink the swollen area of the trachea temporarily for children with moderate or severe difficulty with breathing. Inhaled adrenaline (epinephrine) often improves croup symptoms 30 minutes after the treatment is given. However, the improvement usually disappears two hours after treatment.
- **DO NOT give cough medicines** which contain ingredients that can make a child drowsy. This will not help a child who may need extra effort to breathe. You may not be aware of all the ingredients of cough medicines and so it is best to avoid them altogether. There is no evidence anyway that cough medicines and decongestants help in croup.
- **Antibiotic medicines are not usually prescribed** as croup is normally caused by a virus. Antibiotics do not kill viruses.

When to seek medical help

Always consult a doctor or nurse if you have any concerns about your child. Most children with croup have mild symptoms and soon get better. However, a minority need hospital care. In particular, see a doctor quickly if:

- **Breathing symptoms get worse.** (Breathing is often noisy with mild croup but it is **difficulty** in breathing that is worrying.) Signs that breathing is getting worse include: rapid breathing; needing more effort to breathe; you may see the chest or neck muscles being pulled in with each breath.
- The child becomes restless or agitated.
- The child looks unusually pale.
- A high temperature (fever) lasts longer than five days.

And call for an emergency ambulance if the child is:

- Blue (cyanosed).
- Unusually sleepy.
- Struggling to breathe.
- Drooling and unable to swallow.

Further help & information

Pregnancy and baby guide - NHS Choices

Web: www.nhs.uk/Conditions/pregnancy-and-baby/pages/pregnancy-and-baby-care.aspx

Further reading & references

- Croup; NICE CKS, September 2012 (UK access only)
- Russell KF, Liang Y, O'Gorman K, et al; Glucocorticoids for croup. Cochrane Database Syst Rev. 2011 Jan 19;(1):CD001955.
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