

Are glucocorticoids the best drug for relieving croup?

Clinical Question	Are glucocorticoids effective and safe for treating croup in children aged 18yrs and below?
Bottom Line	<p>Budesonide and dexamethasone reduced the symptoms of croup within two hours of treatment, with the effect lasting at least 24 hours. One trial showed that prednisolone reduced the symptoms of croup within six hours, with the effect lasting at least 12 hours. One trial showed that fluticasone did not reduce the symptoms of croup after two, six, or 24 hours compared to placebo. Compared to placebo, both budesonide and dexamethasone may have reduced the rate of return visits and/or (re)admissions to the hospital or emergency department.</p> <p>Thirteen studies investigated one glucocorticoid compared to another glucocorticoid. Compared to budesonide, dexamethasone may have resulted in greater reductions in symptoms of croup after six and 12 hours.</p>
Caveat	<p>Most of the evidence presented in this review was graded as low. This was caused by 98% of the studies included being graded as having unclear or high risk of bias.</p> <p>Adverse events were only measured in 53% of the included studies and only 8 studies reported adverse events which were mainly secondary bacterial infections, e.g. pneumonia, otitis media.</p>
Context	Respiratory viruses are the main cause of croup in children. Croup leads to a swelling of the throat and airway, which can make breathing difficult. Children also present with a special type of cough called a barking cough. Glucocorticoids are types of steroids that help reduce the swelling, thereby making it easier for children with croup to breathe.
Cochrane Systematic Review	Aregbesola A, Tam CM, Kothari A, Le M-L, Ragheb M, Klassen TP. Glucocorticoids for croup in children. Cochrane Database of Systematic Reviews 2023, Issue 1. Art. No.: CD001955. DOI: 10.1002/14651858.CD001955.pub5. This review contains 45 trials with a total of 5888 participants.

Pearls No. 715, January 2023, written by Assoc Professor Vanessa MB Jordan.

Systematic review link:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD001955.pub5/full>