

Homemade spacers are effective in delivering bronchodilator therapy to children with acute wheezing or asthma

Clinical question	How effective are homemade spacers (plastic cold-drink bottles, polystyrene cups, plastic zip-up bags) in delivering bronchodilator therapy to children with acute exacerbations of wheezing or asthma?
Bottom line	The review did not identify a difference between commercially produced and homemade spacers for delivering beta 2 agonists through a metered-dose inhaler (MDI) to children under 18 years with acute exacerbations of wheezing or asthma. The outcomes studied included hospital admissions, change in oxygen saturation, clinical scores, change in peak expiratory flow rate, and need for additional treatment.
Caveat	Care should be taken in the interpretation and applicability of these results because of the small number of randomised controlled trials, along with few events available meeting the criteria for inclusion in the review, and absence of the primary outcome of interest and other clinically important outcomes in the majority of the included studies. Given the small total sample and wide confidence intervals, equivalence between the treatments cannot be claimed.
Context	Asthma is a major cause of childhood morbidity ¹ and disability ² with acute exacerbations of the disease being a common reason for emergency department admissions and hospital admissions. ³ Inhaled therapy using a MDI with attached spacer, has been increasingly recognised as the optimal method of delivering rapid acting beta 2 agonists for acute exacerbation of wheezing or asthma.
Cochrane Systematic Review	Rodriguez C et al. Commercial versus home-made spacers in delivering bronchodilator therapy for acute therapy in children. Cochrane Reviews 2008, Issue 2. Art. No. :CD005536. DOI :10. 1002/14651858. CD005536.pub2. This review contains 6 trials involving 658 participants.
Pearls No. 79, July 2008, written by Brian R McAvoy	

1. Braman SS. Chest 2006;130:4S-12S.

2. Newacheck PW et al. Archives of Paediatric and Adolescent Medicine 2000;154:287-293.

3. Akinbami LJ et al. Paediatrics 2002; 110:315-322.

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