

Cochrane Corner

Over the counter treatment for acute cough

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Over the counter medications are commonly used by the general public for respiratory tract infections. They are not funded by the government and hence tend not to be prescribed by general practitioners. They come in broad categories and

in a number of cases have three or more components in them. This makes the multi-component compounds difficult to study, in part because they contain medicines at low doses. The Cochrane review of these medications for acute cough in am-

bulatory settings was very cautious about recommending any of the medications discussed below.* They commented that the quality of the studies was low, the number of patients was small and the effect sizes were often not reported.

Five types of over the counter medication were considered:

1. **Antitussives.** These are medications which are centrally acting opioid derivatives which aim to reduce the cough reflex.
2. **Expectorants.** These medications increase bronchial mucous production making secretions easier to remove by cough or ciliary transport.
3. **Mucolytics.** These decrease the viscosity of bronchial secretions thereby making them easier to remove through coughing.
4. **Antihistamine decongestant combinations.** These block the H1 receptors and the decongestants cause vasoconstriction of the mucosal blood vessels.
5. **Antihistamines alone.**

Table 1. Possibly effective in adults (all the evidence is from randomised controlled trials)

	Effectiveness	Class of drug	Adverse effects	Other
Bromhexine hydrochloride (e.g. Bisolvon) 4mg tds for 4 days	Yes NNT=19 for cough	Mucolytic	Not reported	Only one study
Guaifenesin (eg Actifed CC Chesty Cough; Robitussin Ex; Lemsip Chesty Cough) 480mg qid for 30 hours	Effective NNT=2 for reduced cough	Expectorant	Headaches and drowsiness	Only one study
Guaifenesin 200mg qid for 3 days	NNT=2 for reduced sputum thickness	Expectorant	Not reported	Only one study

* Cochrane library; www.cochrane.org

Table 2. Mixed effectiveness in adults (Some studies show benefit others do not)

	Effectiveness	Class of drug	Adverse effects	Other
Dextromethorphan (e.g. Benadryl Dry Forte; Robtussin DX; Strepsils Dry Cough Liquid) 30mg stat	One study found a benefit one did not	Antitussive	Not reported	Conflicting trial data
Moguisteine 600mg/day for 3.5 days	Reduced night cough	Antitussive	Nausea, vomiting, abdominal pain	Did not benefit day cough
Dexbrompheniramine 6mg + pseudoephedrine 120mg bd for 1 week	Beneficial	Antihistamine/decongestant	Dizziness and dry mouth	Other anti-histamine decongestant trial had no benefit
Loratadine 5mg + pseudoephedrine 120 mg (e.g. Clarinase) bd	No benefit	Antihistamine/decongestant	Dry mouth headache and insomnia	

Table 3. Not effective in adults (No studies show a benefit)

	Effectiveness	Class of drug	Adverse effects	Other
Codeine 30mg qid or 50mg stat	No benefit	Antitussive	Not reported	
Terfenadine 120mg bd for 4 days or 60 mg bd for 3.5 days	No benefit	Antihistamine	Headache	
Thonzylamine 50mg tds for 3 days	No benefit	Antihistamine	Drowsiness, giddiness and headache	

Table 4. Possibly effective in children

	Effectiveness	Class of drug	Adverse effects	Other
Letosteine 25mg tds for 10 days	Effective on symptom score	Mucolytic	Not reported	Only one study

Table 5. Not effective in children

	Effectiveness	Class of drug	Adverse effects	Other
Dextromethorphan	Not effective	Antitussive	Not reported	
Codeine	Not effective	Antitussive	Not reported	
Brompheniramine/ Phenylpropanolamine with (e.g. Dimetapp DM Cold & Cough) or without Phenylephrine (e.g. Dimetapp)	Not effective	Antihistamine decongestant	Not reported	
Clemastine and Chlorpheniramine (e.g. Histafen)	Not effective	Antihistamine	Drowsiness	

NNT = numbers needed to treat for one remission

Members of the Royal New Zealand College of General Practitioners can have access to the full reviews by contacting Cherylyn Pearson at the College in Wellington. For the access codes to the Cochrane library contact cpearson@rnzcgp.org.nz at the College.