



Cochrane
Library

Cochrane Database of Systematic Reviews

Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children (Review)

Hawke K, van Driel ML, Buffington BJ, McGuire TM, King D

Hawke K, van Driel ML, Buffington BJ, McGuire TM, King D.
Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children.
Cochrane Database of Systematic Reviews 2018, Issue 4. Art. No.: CD005974.
DOI: [10.1002/14651858.CD005974.pub4](https://doi.org/10.1002/14651858.CD005974.pub4).

www.cochranelibrary.com

Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children
(Review)

Copyright © 2018 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

WILEY

[Intervention Review]

Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children

Kate Hawke¹, Mieke L van Driel^{1,2,3}, Benjamin J Buffington⁴, Treasure M McGuire^{5,6,7}, David King¹

¹Primary Care Clinical Unit, Faculty of Medicine, The University of Queensland, Brisbane, Australia. ²Centre for Research in Evidence-Based Practice (CREBP), Bond University, Gold Coast, Australia. ³Department of Family Medicine and Primary Health Care, Ghent University, Ghent, Belgium. ⁴Department of Paediatrics, Wide Bay Hospital and Health Service, Bundaberg, Australia. ⁵Faculty of Health Sciences and Medicine, Bond University, Gold Coast, Australia. ⁶School of Pharmacy, The University of Queensland, Brisbane, Australia. ⁷Mater Pharmacy Services (Practice & Development), Mater Health Services, South Brisbane, Australia

Contact address: David King, Primary Care Clinical Unit, Faculty of Medicine, The University of Queensland, 288 Herston Road, Herston, Brisbane, Queensland, 4006, Australia. d.king@uq.edu.au, d.king@som.uq.edu.au.

Editorial group: Cochrane Acute Respiratory Infections Group.

Publication status and date: New, published in Issue 4, 2018.

Citation: Hawke K, van Driel ML, Buffington BJ, McGuire TM, King D. Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children. *Cochrane Database of Systematic Reviews* 2018, Issue 4. Art. No.: CD005974. DOI: [10.1002/14651858.CD005974.pub4](https://doi.org/10.1002/14651858.CD005974.pub4).

Copyright © 2018 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

ABSTRACT

Background

Acute respiratory tract infections (ARTIs) are common and may lead to complications. Most children experience between three and six ARTIs each year. Although these infections are self limiting, the symptoms can be distressing. Many treatments are used to control symptoms and shorten the duration of illness. They often have minimal benefit and may lead to adverse effects. Oral homeopathic medicinal products could play a role in the treatment of ARTIs for children if evidence for effectiveness is established.

Objectives

To assess the effectiveness and safety of oral homeopathic medicinal products compared with placebo or conventional therapy to prevent and treat acute respiratory tract infections in children.

Search methods

We searched CENTRAL (2017, Issue 11), which contains the Cochrane Acute Respiratory Infections Specialised Register, MEDLINE (1946 to 27 November 2017), Embase (2010 to 27 November 2017), CINAHL (1981 to 27 November 2017), AMED (1985 to December 2014), CAMbase (searched 29 March 2018), British Homeopathic Library (searched 26 June 2013 - no longer operating). We also searched the WHO ICTRP and ClinicalTrials.gov trials registers (29 March 2018), checked references, and contacted study authors to identify additional studies.

Selection criteria

Double-blind, randomised controlled trials (RCTs) or double-blind cluster-RCTs comparing oral homeopathy medicinal products with identical placebo or self selected conventional treatments to prevent or treat ARTIs in children aged 0 to 16 years.

Data collection and analysis

We used standard methodological procedures expected by Cochrane.

Main results

We included eight RCTs of 1562 children receiving oral homeopathic medicinal products or a control treatment (placebo or conventional treatment) for upper respiratory tract infections (URTIs). Four treatment studies examined the effect on recovery from URTIs, and four

Homeopathic medicinal products for preventing and treating acute respiratory tract infections in children (Review)

1

Copyright © 2018 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

studies investigated the effect on preventing URTIs after one to three months of treatment and followed up for the remainder of the year. Two treatment and two prevention studies involved homeopaths individualising treatment for children. The other studies used predetermined, non-individualised treatments. All studies involved highly diluted homeopathic medicinal products.

We found several key limitations to the included studies, in particular methodological inconsistencies and high attrition rates, failure to conduct intention-to-treat analysis, selective reporting, and apparent protocol deviations. We assessed three studies as at high risk of bias in at least one domain, and many had additional domains with unclear risk of bias. Three studies received funding from homeopathy manufacturers; one reported support from a non-government organisation; two received government support; one was cosponsored by a university; and one did not report funding support.

Methodological inconsistencies and significant clinical and statistical heterogeneity precluded robust quantitative meta-analysis. Only four outcomes were common to more than one study and could be combined for analysis. Odds ratios (OR) were generally small with wide confidence intervals (CI), and the contributing studies found conflicting effects, so there was little certainty that the efficacy of the intervention could be ascertained. All studies assessed as at low risk of bias showed no benefit from oral homeopathic medicinal products; trials at uncertain and high risk of bias reported beneficial effects.

We found low-quality evidence that non-individualised homeopathic medicinal products confer little preventive effect on ARTIs (OR 1.14, 95% CI 0.83 to 1.57). We found low-quality evidence from two individualised prevention studies that homeopathy has little impact on the need for antibiotic usage (N = 369) (OR 0.79, 95% CI 0.35 to 1.76). We also assessed adverse events, hospitalisation rates and length of stay, days off school (or work for parents), and quality of life, but were not able to pool data from any of these secondary outcomes.

There is insufficient evidence from two pooled individualised treatment studies (N = 155) to determine the effect of homeopathy on short-term cure (OR 1.31, 95% CI 0.09 to 19.54; very low-quality evidence) and long-term cure rates (OR 1.01, 95% CI 0.10 to 9.96; very low-quality evidence). Adverse events were reported inconsistently; however, serious events were not reported. One study found an increase in the occurrence of non-severe adverse events in the treatment group.

Authors' conclusions

Pooling of two prevention and two treatment studies did not show any benefit of homeopathic medicinal products compared to placebo on recurrence of ARTI or cure rates in children. We found no evidence to support the efficacy of homeopathic medicinal products for ARTIs in children. Adverse events were poorly reported, so conclusions about safety could not be drawn.

PLAIN LANGUAGE SUMMARY

Are oral homeopathic medicinal products effective and safe to prevent and treat acute respiratory tract infections in children?

Review question

We investigated whether oral homeopathic medicinal products are effective and safe to prevent or treat acute respiratory tract infections (ARTIs) in children compared with an inactive (placebo) treatment or other medicines.

Background

Most respiratory infections resolve without treatment, but sometimes symptoms persist after the initial infection has gone. Treatment is therefore aimed at relieving symptoms. Respiratory infections are commonly caused by viruses, especially colds and flu, though some lung and ear infections are caused by bacteria. It may be difficult to distinguish between viral and bacterial infections, and they may coexist. Antibiotics are often prescribed for respiratory infections even though they are ineffective against viruses.

Children have on average three to six respiratory tract infections annually. Although most are mild and treatable, they sometimes require hospital treatment, and very rarely result in death.

Homeopathy may treat respiratory infections with few side effects, but its effectiveness and safety has not been well researched.

We assessed evidence from randomised controlled trials (studies that allocate people by chance to receive treatment), which is the best way to assess the safety and efficacy of medical treatments.

Search date

Our evidence is current to 27 November 2017.

Study characteristics

We included eight studies involving 1562 children that compared oral homeopathic treatment to either placebo or standard treatment to prevent or treat respiratory infections in children. All studies investigated upper respiratory tract (from the nose to the windpipe (trachea)) infections, but one combined reporting of upper and lower respiratory tract (from the windpipe to the lungs and pleura (membranes covering the lungs)) infections, so the numbers of children with upper or lower infections is unknown.

Study funding sources

Three studies received funding from homeopathy manufacturers; one reported support from a non-government organisation; two received government support; one was cosponsored by a university; and one did not report funding support.

Key results

Studies investigated a range of interventions for various illnesses and populations using different outcome measures, so only a small number could be combined for analysis. All moderate-quality studies (low risk of bias) showed little or no beneficial effects for homeopathic medicinal products, whether individualised by a trained homeopath or a standard, non-individualised commercially available therapy. Where results could be combined, there was probably little or no difference in benefit on short- or long-term cure, or in prevention of ARTI.

Two low-quality studies (unclear or high risk of bias) showed some benefit of homeopathic medicinal products for a limited number of outcomes. One study showed a reduction in disease severity for the homeopathy group at some time points. The other study showed a reduction in number of respiratory infections over the following year in the treatment groups, although more than a quarter of participants were not accounted for in the results. There was no difference between homeopathy and placebo groups for parents' time off work, antibiotic use, or adverse effects. Consequently, there is no convincing evidence homeopathic medicinal products are effective in treating ARTIs in children. We are unsure about safety because data on adverse events were poorly reported.

Quality of the evidence

We rated evidence as moderate or low quality for most outcomes. Three outcomes provided very low-quality evidence because study populations and results differed significantly among studies; there were significant limitations in study design and reporting; and sample sizes were small.