Authors' objectives
To examine the evidence of seven randomised controlled trials (RCTs) on the therapeutic effectiveness of zinc gluconate lozenges for treating the common cold.

Searching
MEDLINE was searched from 1966 using the MeSH terms 'zinc gluconate' and 'common cold'.

Study selection
Study designs of evaluations included in the review
Published, double-blind RCTs were included.

Specific interventions included in the review
Zinc gluconate (4.5, 13.3, 23 mg) with sorbitol, mannitol or citric acid, versus placebo.

Participants included in the review
Adults, aged 18 to 65 years, who were not pregnant and had no serious co-morbidity, were included.

Outcomes assessed in the review
The outcomes were symptom severity and the duration of illness. Fever, nasal symptoms, pharyngeal symptoms, cough, headache, and body aches were evaluated.

How were decisions on the relevance of primary studies made?
The author alone assessed the trials for inclusion.

Assessment of study quality
The author does not state that they assessed validity.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The author discussed the included trials in a narrative review with no statistical pooling of the data. The narrative review presented each trial's details, results, and observed deficiencies.

How were differences between studies investigated?
The author does not state how differences between the trials were investigated.

Results of the review
Seven articles with 9 trials were included in the review; 855 participants were enrolled, but only 603 took part (302 participants in the treatment group and 301 in the control group).

Starting the therapy with zinc gluconate lozenges within 24 to 48 hours of the onset of cold symptoms reduced the
symptoms and severity of the cold. Patients must suck lozenges every 2 hours while awake during the cold. The minimum effective dose appeared to be 13.3 mg of elemental zinc per lozenge.

The evidence suggested that compounds such as citric acid, sorbitol and mannitol bind the free zinc ion in the mouth, and this could account for variations in therapeutic benefit.

Bad taste and nausea were side-effects of zinc lozenges.

**Authors' conclusions**
The evidence supported the use of zinc gluconate lozenges for reducing the symptoms and duration of the common cold. However, the side-effects, bad taste, and therapeutic protocol might limit patient compliance.

**CRD commentary**
The author clearly stated the research question and the inclusion criteria for the review. The author conducted a good review of the literature and, although it is unlikely that additional studies have been missed, he has not addressed issues of bias by searching for unpublished or non-English data.

The primary trials were tabulated clearly, and the content of each of the trials was discussed individually in the text of the review. There was no assessment or scoring of the quality of the included trials, or reporting of how judgements were made about the inclusion of the studies. The criteria and methods used for the data extraction process were also not stated.

The results should be viewed with caution pending additional research, since the results of the trials could only be pooled in a narrative review without any statistical analysis or measurement of heterogeneity between the studies.

**Implications of the review for practice and research**
Practice: The author did not state any implications for practice.

Research: The author states that large, multicentre trials including diagnostic virology would help define more clearly the therapeutic role of zinc gluconate lozenges.

**Bibliographic details**

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**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.