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# Zinc Lozenges for the Common Cold

1/25/2012  
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*Recent review shows this popular treatment may shorten cold duration*

## Reference

Hemila H. Zinc lozenges may shorten the duration of colds: a systematic review. *Open Respir Med J.* 2011 Jun 23. [Epub ahead of print]

## Design

Meta-analysis of 13 double-blind, placebo-controlled trials examining the therapeutic effect of zinc lozenges on the duration of the common cold.

## Participants

A total number of 1,407 community-acquired cold episodes were examined in young adults, middle-aged adults, and schoolchildren.

## Study Parameters

Thirteen separate double-blind studies were identified in which patients were administered zinc lozenges with doses of elemental zinc ranging from 30 mg to 207 mg per day and examined for common cold duration as compared to placebo. Results were analyzed using Fisher combined P values and pooled using the inverse-variance method.

## Key Findings

Of the 13 studies included in the analysis, 7 studies reported a statistically significant decrease in cold duration with zinc supplementation. Due to a highly significant heterogeneity by dose, the trials were divided into low- and high-dose subgroups. Seven of the 8 studies with a dose above 75 mg daily showed a significant reduction in reported duration of the common cold; however, none of the 5 studies with a dose below 75 mg daily showed a significant effect.

In pooling P values from high-dose (over 75 mg) trials, zinc reduced reported common cold duration by 32%. In the 3 trials using zinc acetate as opposed to other mineral salts, the pooled effect was a 42% reported reduction. The findings suggest that zinc lozenges at a dose of >75 mg are effective at reducing the duration of the common cold, while lower dose zinc is not effective.

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by: Barry W. Ritz, PhD

Section: Abstracts & Commentary



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“Zinc may be effective at reducing the duration of symptoms of the common cold when taken at early onset and at a dose greater than 75 mg per day.”

## Clinical Implications

The results discussed here are consistent with several other reviews of zinc and common cold duration. A 2000 meta-analysis of the same 13 trials by Jackson and colleagues reported no overall effect of zinc on common cold duration, but dose was not considered.<sup>1</sup> Recently, Nahas and Balla reported an overall reduction in symptom duration and severity in 5 of 9 trials of zinc lozenges examined, noting limitations associated with dose and bioavailability of dosage forms.<sup>2</sup> In addition, a 2011 Cochrane review analyzed zinc in the treatment of the common cold, identifying 15 randomized controlled trials including a total of 1,360 healthy patients across all age groups in which the efficacy of zinc lozenges or syrup on cold duration was compared to placebo.<sup>3</sup> According to the report, zinc was most effective at reducing both the duration and severity of common cold symptoms when taken within 24 hours of the onset of symptoms. Again, the review noted heterogeneity in the data and a need for further study regarding zinc dose, formulation, and duration of use required to produce clinical benefits. Taken together, these results suggest that zinc may be effective at reducing the duration of symptoms of the common cold when taken at early onset and at a dose greater than 75 mg per day. No trials were identified evaluating zinc in the prevention of the common cold. Further, although studies were analyzed across age groups, only 1 trial was included in which the efficacy of zinc lozenges was assessed in school-aged children, and this trial demonstrated no effect with zinc at doses of 50–60 mg.<sup>4</sup>

The recommended dietary allowance for zinc is 11 mg for adult men and 8 mg for adult women, and the tolerable upper limits of zinc intake range from 4 mg/day to 34 mg/day in children (birth to 18 years of age) and up to 40 mg/day for adults. The maximum daily intake of zinc should not exceed 150 mg. Commonly available over-the-counter zinc lozenges or syrups provide an average daily dose of approximately 80 mg of elemental zinc. Although this is above the published upper limit, a low incidence of adverse events was observed in the studies reviewed, suggesting the likelihood of safety for short-term supplementation during the incidence of a common cold. As with any such product, zinc should be used only under the direct supervision of a healthcare provider, as toxicity may occur at higher doses or over longer periods of time. General caution should also be taken at elevated intake levels as zinc has been shown to interfere with the absorption of certain antibiotics and other minerals, like iron and copper.<sup>5–7</sup> These interactions may be minimized by recommending zinc with food and separated from medications.

## References

1. Jackson JL, Lesho E, Peterson C. Zinc and the common cold: a meta-analysis revisited. *J Nutr.* 2000;130:1512S-1515S.
2. Nahas R, Balla A. Complementary and alternative medicine for prevention and treatment of the common cold. *Can Fam Physician.* 2011;57:31-36.
3. Singh M, Das RR. Zinc for the common cold. *Cochrane Database of Systematic Reviews* 2011, Issue 2. Art. No.: CD001364. DIO: 10.1002/14651858.CD001364.pub3
4. Macknin ML, Piedmonte M, Calendine C, Janosky J, Wald E. Zinc gluconate lozenges for treating the common cold in children: a randomized controlled trial. *JAMA.* 1998;279:1962-7.
5. Neuvonen PJ. Interactions with the absorption of tetracyclines. *Drugs.* 1976;11:45-54.
6. Olivares M, Pizarro F, Ruz M. New insights about iron bioavailability inhibition by zinc. *Nutrition.* 2007; 23(4):292-295.
7. Hoffman HN II, Phyllyk RL, Fleming CR. Zinc-induced copper deficiency. *Gastroenterology.* 1988;94:508-512.

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## About the Author



Barry W. Ritz, PhD, is the Vice President of Scientific and Regulatory Affairs at Atrium Innovations, Inc., and is an active researcher in the emerging field of nutritional immunology. Ritz completed his master's and doctorate degrees at Drexel University. He is involved in a number of professional organizations, including the American Society for Nutritional Sciences. Ritz has presented his research at national and international meetings, has numerous publications in scientific journals, and authored a chapter on the use of nutraceuticals for immune restoration in the elderly in the *Handbook on Immunosenescence: Basic Understanding and Clinical Applications*.



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